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Hybrid Locomotives

February 24, 1958

RAILWAY AGE *weekly*



DF cars ↑ cut damage in stop-off loads

Operations Research

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Railroads map fight for grain trafficp. 9

Several western roads have acted to recapture grain traffic lost to trucks. They propose to reduce rates on a sliding scale, with the biggest cuts going to short-haul business. Shippers have lined up in favor of the proposal.

NIT League opposes Symes planp.10

A special meeting of the shippers' organization has voted against creation of a government agency to buy rolling stock and lease it to railroads. The league, in so doing, turned down the report of a special committee which supported the principles of federal equipment leasing.

New Haven 2-in-1 locomotives swing into actionp.11

They eliminate the nuisance of changing engines at New Haven. Run mostly in passenger service, they're built for freight operations, too. Here's an account of what the hybrids are doing—and what makes them different.

Where should the new yard go?p.13

Operations research offers railroad managements an effective tool for making a systematic, scientific yard-site choice. How it works, what angles it considers, where it's better than seat-of-the-pants decisions, is told in a special Railway Age article.

They're still building the busy QNS&Lp.18

When they tapped the Labrador ore fields, they transformed a desolate, sub-arctic region into a thriving transportation hub. And, as you might expect, they ran into some unique railroad construction problems. They're still working to overcome some of them.

A two-way look at DF cars:

How the Reading cuts damage in transitp.25

This road won over an important group of shippers to the use of specialized equipment with a successful experimental program.

Shippers join the railroads' claims fightp.28

A number of railroad customers have pioneered research efforts to trim damage losses. Versatility of DF equipment is a big factor.

Action Page—Instead of the crying towelp.42

This way Mr. Railroader might sound better. Tears are the sign of a frustrated complaint. Rather than weep, maybe we should ask for the same shake the competition gets.



MR. LOWELL THOMAS AND THE HERTZ IDEA ARE SELLING TRAIN TRAVEL FOR YOU!

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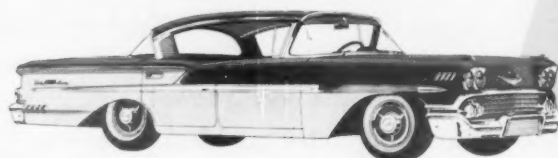
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Week at a Glance CONT.

Current Statistics

Operating revenues, eleven months	
1957	\$9,666,631,198
1956	9,674,662,959
Operating expenses, eleven months	
1957	\$7,543,886,467
1956	7,413,175,457
Taxes, eleven months	
1957	\$1,011,020,756
1956	1,046,585,941
Net railway operating income, eleven months	
1957	\$863,352,199
1956	984,434,802
Net income estimated, eleven months	
1957	\$661,000,000
1956	784,000,000
Average price 20 railroad stocks	
February 18, 1958	74.37
February 18, 1957	89.76
Carloadings revenue freight	
Six weeks, 1958	3,246,928
Six weeks, 1957	3,878,204
Average daily freight car surplus	
Wk. ended Feb. 15, 1958	113,071
Wk. ended Feb. 16, 1957	7,859
Average daily freight car shortage	
Wk. ended Feb. 15, 1958	40
Wk. ended Feb. 16, 1957	2,370
Freight cars on order	
February 1, 1958	48,787
February 1, 1957	114,656
Freight cars delivered	
One month, 1958	7,219
One month, 1957	8,403

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Short and Significant

RR tax cut has been approved . . .

without opposition in the New York State Assembly. State Senate approval is needed before the tax-reducing measure becomes law. The bill calls for an 85 per cent reduction in local taxation of grade-crossing elimination projects ordered by the state. Cost of such projects is divided between the state and carriers on an 85-15 per cent basis. Railroads, however, are now assessed for local tax purposes on the full value of the project. Under the bill, railroads would pay on only 15 per cent of the total cost.

Next move in the fight . . .

for control of the Toledo, Peoria & Western will come April 11. A three-man statutory court in Minneapolis will hold hearings on the case then. The Minneapolis & St. Louis previously obtained a restraining order blocking sale of the strategic bridge road to the Santa Fe and Pennsylvania. M&StL's present application seeks review of ICC Division 4 findings which authorized AT&SF-PRR control of the TP&W.

New York Central's \$12-million electronic . . .

freight yard at Elkhart, Ind., will be formally dedicated March 6. It will be named the Robert R. Young Yard, in honor of the road's late board chairman.

Inter-connection of commuter lines . . .

has been suggested as a major factor in solving Chicago's rapid transit problems. Service on this "outer loop" of railroad lines could then be coordinated with transit authority operations. It's been proposed that the city railroad terminal authority study the overall commuter service problem.

Oil and gas revenues . . .

totaling about \$8,000,000 are expected in 1958 by Northern Pacific. That's almost \$6,500,000 above 1955 figures and some \$2,000,000 better than last year's total.

First class air travel — is it?

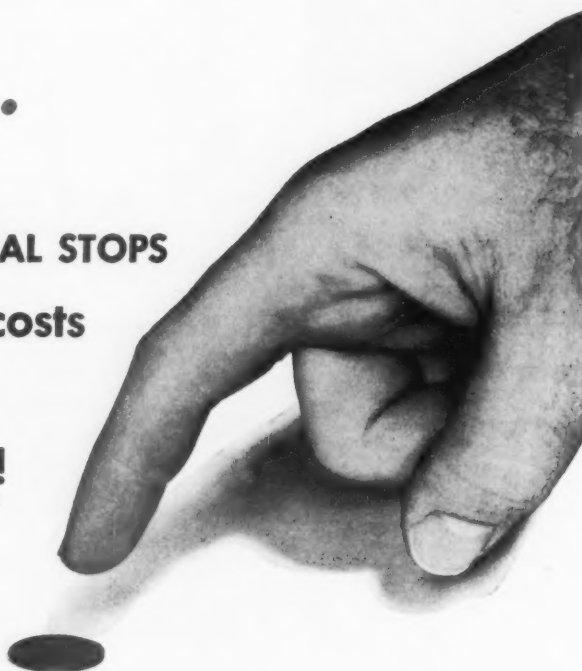
Not by comparison with first-class rail service, a pamphlet soon to be issued by a western line will show. The comparison of air and rail service classes will voice what many railroaders long have contended—that for all the hoopla, first-class air travel is best likened to rail coach service, not rail first class.

Train-off case goes to court

Rio Grande has appealed to District Court in Colorado for a review of its bid to drop two money-losing passenger trains. Previously, the state PUC denied the road's petition and a follow-up application for a rehearing. Colorado law provides two choices in such cases — accept the PUC decision or go to court.

It's a fact...

**that MAGNUS R-S JOURNAL STOPS
can cut total hot-box costs
to less than
1 cent per car per day!**



*Operating experience with more than
5,000 freight cars proves that Solid
Bearings and Journal Stops are the
low-cost solution to the hot-box problem*

Railroads using low-cost solid bearings and R-S Journal Stops today average over 6,000,000 car miles per hot box. Conservatively, new users of R-S Journal Stops can increase hot box mileage 10 times — can cut hot box costs to a tenth of current costs on similar cars in similar service. That means less than $\frac{1}{3}$ cent per car per day to cover all costs associated with bearing road failures.*

That's just one of the facts about R-S Journal Stops, proved now on over 5000 cars in service. Essentially, they stabilize the bearing assembly, help provide uniform, uninterrupted oil film lubrication, give the solid bearing a chance to work at optimum efficiency.

Results: you double bearing life, reduce wheel flange wear, cut necessary service attention, prevent dust guard damage — in short, save on truck maintenance all along the line. This reduced maintenance alone will save you enough to pay for the Stops in 3 years.

And with R-S Journal Stops, you still have all the other advantages which low-cost solid bearings bring to railroad rolling stock. You can take the maximum load, make the fastest schedule. Lading gets the smoothest ride. You save excess dead weight and get lowest possible running resistance in pounds per ton. Best of all, you'll be sure of the kind of bearing performance you want at a price you can afford to pay. Write us for all the facts. Magnus Metal Corporation, 111 Broadway, New York 6, New York; or 80 E. Jackson Blvd., Chicago 4, Illinois.

*Cost based on data compiled by the Mechanical Division of the Association of American Railroads in 1955.

MAGNUS
Solid Bearings



*Right for Railroads
...in performance...in cost*

MAGNUS METAL CORPORATION *Subsidiary of* **NATIONAL LEAD COMPANY**

RRs Map Fight for Grain Traffic

Act to meet truck competition by cutting rates on a sliding scale. Greatest reductions would be for short-haul business, where competition is sharpest. Proposal may be published within 60 to 90 days.

By next harvest time, several western railroads may be in good position to recapture grain traffic lost to the truckers.

The plan: reduce rates on a sliding scale, with greatest reductions going to short-haul traffic, where competition is most intense. The western lines' proposal—reached through an agreement resolving differences in two approaches—may be published within the next 60 to 90 days.

The new rates, one traffic officer declared, "will do much to hold and regain grain business" for the railroads. Shippers he indicated, have lined up very much in favor of the proposal.

The Chicago & North Western started the move for widespread rate cuts last fall, with an application involving movement of grain and grain products from C&NW stations in eight states to primary markets in Western Trunk Line territory. About one month later, a second application was filed in behalf of other roads in the territory.

The final proposal, now being checked out, is the result of give-and-take between the two original applications.

Among major features of the plan:

- Reductions will be limited to the so-called feeding grains and soybeans, excluding wheat.

- Present transit privileges will be included. The proposal will be applied in connection with transit on outbound grain products so interior processors may have the benefit of reductions proposed to the markets.

- The final rate will reflect a difference of about one cent between the scale proposed by the C&NW and that proposed by other WTL roads.

The North Western's original application covered all grains moving into primary markets from stations in Iowa, Michigan, Wisconsin, Minnesota, Wyoming, Nebraska, North Dakota and South Dakota. Rates were pegged at nine cents per 100 lb for the first 50 miles and less, and one cent for each additional 10-mile block.

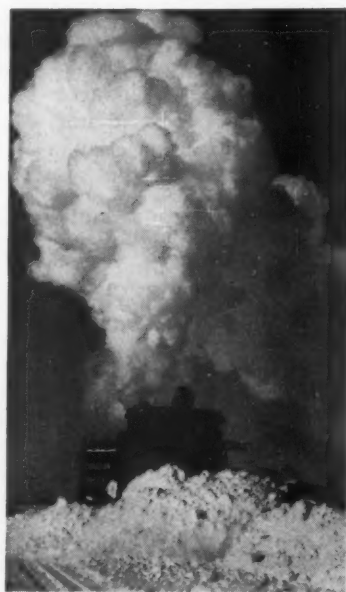
The later application involved grain moving into market areas from six states—the Dakotas, Iowa, Minnesota, Wisconsin and part of Missouri. The rate proposed was 10 cents per 100 lb for the first 40 miles or less, one cent for each additional 10-mile block. Only coarse grains and soy-

beans were included in the application.

The program finally approved covers movements from origin points in Minnesota, Iowa, Wisconsin and the Dakotas.

Roads making the application noted that, at present, rates on coarse grains and soybeans are on a par with wheat grains. But, it was indicated, surveys showed truck competition is most serious on movement of corn, soybeans and oats.

Trucking of wheat involves mainly short-haul business on movements to ports for trans-shipment by water. Most of the wheat, rye, and barley traffic, studies demonstrated, is still moving by rail.



Old Man Winter's Tough!

One of the Canadian Pacific's 200 snow plows shows how it eliminates snow drifts. The road relies mainly on its plows to clear the main lines of its 17,000-mi system. During the severe 1955-56 winter, CPR snow plows cleared 226,942 miles of track. In the less severe winter of 1956-57, plows cleared 70,721 track miles.

A report by the Minnesota grain weighing department points up the impact of trucking on the grain business.

Shipments of grain by truck, the department found, almost doubled in 1957. Volume increased from 19,396,382 bushels in 1956 to more than 38,500,000 bushels in 1957. The total didn't include large numbers of grain-hauling trucks not under the department's supervision.

The railroads' survey, however, found that stiffest truck competition concentrated on the short-haul business. Hence the sliding rate scale, which gives close-in traffic a bigger rate break. Proposed reductions ease out to meet present rates at about the 400-mile point.

C&NW said its action in filing the first application reflected the rate thinking of the road's top management. Chairman Ben W. Heineman boiled it down to two sentences recently at a regulatory commission hearing in South Dakota:

"I do not believe the answer to the railroads' problems is increasing rates. I believe in lower rates combined with more efficient operation."

One observer saw the grain rate proposal—and other similar rate cuts—as a strong indication of new rail efforts to meet competition. But he noted, meeting competition is more or less passive, as opposed to the "active" aspect of making competition.

The new western grain rates, it's indicated, will be filed on a permanent basis rather than as a time-limit experiment. It's expected, at least in some quarters, that the proposal may have fairly smooth sailing through regulatory channels.

A somewhat comparable case—though filed in only one state—won quick commission approval. The authorized reduction, about 50% for grain moving to market via the Minnesota Western, resulted in an immediate and sizeable pickup in MW grain loadings. The Western lost money last year—but its parent Minneapolis & St. Louis is looking for a reversal of form in 1958, due in part to increased grain traffic.

The current western proposal, it's reported, will affect all roads operating in the five states where reductions were approved.

NIT League Opposes Symes Plan

The National Industrial Traffic League has voted to oppose the principles of the Symes plan.

The vote, at the league's recent special meeting in Chicago, was close: 58 to 55. The league turned down the report of a special committee which had voted 11-to-10 to support the principles of government equipment leasing.

The Symes plan calls for a federal agency to purchase rolling stock and lease it to railroads. An adverse report on a pending Senate bill to create such an agency was made recently by the Interstate Commerce Commission (Railway Age, Feb. 17, p. 13).

Richard M. Boyd, chairman of the league's special committee, said his group

supported Symes plan principles, but not the bill before Congress.

"The bill seems to differ from the original proposal for a self-supporting agency," he said, because "it contains a provision for a \$500,000,000 appropriation."

Two provisions in the bill, he added, kept his committee from endorsing it. The first raised doubt whether interest would be charged on the proposed initial \$500,000,000 capital. The committee also was not sure that costs of administering the proposed agency were adequately provided for by the bill.

The committee's recommendations were presented to the league's executive committee. After a day's deliberation, the executive committee voted 21 to 20 against

supporting the report. League membership voted 85 to 67 against adopting the special committee's report.

A new proposal was then offered "opposing the principles of the Symes plan for creation of a government agency to finance construction and lease of railway equipment, and any specific legislation designed to give effect thereto." This motion was adopted as league policy.

Active debate preceded the vote on the special committee's report.

One member pointed to the need for the Symes plan by saying he understood the Boston & Maine recently cancelled an order for 1,000 cars. The cancellation came because money could not be obtained at interest rates up to 10 per cent.

"Railroads are in deep trouble, and no one has come up with a substitute plan for financing rolling stock," another member said. He added that a pool of rolling stock is not practical because railroads cannot get the necessary capital.

"When we deny a tool such as the Symes plan to railroad management we accept the responsibility for any future failure," another member exclaimed.

In case of war, he continued, "we are going to dig ourselves out with the transportation we had at the beginning. Rolling stock which could be purchased through the plan is vitally needed for national defense."

Opposition to the Symes plan could put the league in an embarrassing situation, one member pointed out. The league can't condemn railroads for not furnishing enough cars when it acts against a plan which could help them get the equipment, he said.

Another member explained his opposition to the plan by saying "it could lead us into government ownership." This would be counter to league policy which says "privately owned transportation can best meet the nation's transportation needs."

"If Congress enacted the regulatory changes the league supports it would help railroads more than government car leasing," he said. Such changes in regulation would help give railroads adequate earnings and an adequate car supply, he added.

Another member advocated a plan for purchasing freight cars similar to the plan whereby the Pennsylvania got 225 diesels through a leasing arrangement.

"If the Symes plan is approved we will find barge, truck and air lines asking the government to finance their equipment," another member said. "Congress would have to give them the same deal they gave the railroads."

One member said he did not believe in running to the government every time an industry gets into trouble. "This is the beginning of the end for free enterprise."

Watching Washington *with Walter Taft*

• **USER-CHARGE LEGISLATION** will be recommended soon by the Department of Commerce. The Department will propose levies for use of the federal airways systems. The charges would recover part of what it costs the government to operate that system which provides signaling facilities for air lines.

• **GRADUAL BUILD-UP** to a level of charges which would recover about 80% of the airway operating costs is Commerce's idea. Allowances for military use will be made in determining costs to be recovered from civil users. The 80% recovery basis for the latter would be reached in about five or six years.

• **SIMILAR PRESIDENTIAL IDEA** is already before Congress. It recommends that taxes on aviation fuel be built up over a period of years to 6½ cents per gallon. Mr. Eisenhower is suggesting this as a first step toward establishing user charges in the air transport field.

• **NO RECOVERY** of what the government has spent on airway facilities, or on the federal aid airport program, will be sought by Congress. Its proposed charges will relate entirely to the cost of operating the airway system. That now amounts to about \$400 million a year.

• **SPENDER OF THAT AMOUNT** is the Civil Aeronautics Administration. It has become the largest unit of the Department of Commerce. It now has about 25,000 employees.

• **INLAND WATERWAYS ARE NEXT** on Commerce's list. There too, the department will recommend charges if it decides that the subsidy to users is unwarranted. That decision will come out on studies now under way.

• **ILL WIND** of business slump may now blow some good on the for-hire carriers. It could bring repeal or reduction of the transport taxes.

• **IF RECESSION CONTINUES**, Congress will turn to the cutting of taxes which are business retarders, and the transport taxes are among the recognized leaders in that regard.

DIESEL



HIGHBALLING along main line, dual-purpose engines run on diesel power.

NH 2-in-1 Locomotives in Action

They eliminate an old nuisance—engine changes at New Haven. Run mostly into Grand Central, they're available for Hell Gate operations and freight service. They cost \$8,400,000 but reduce electric power expense and save on maintenance of older engines, some of which have been retired. And they pave the way for possible riddance of overhead wire east of Stamford.

CONTINUED ►



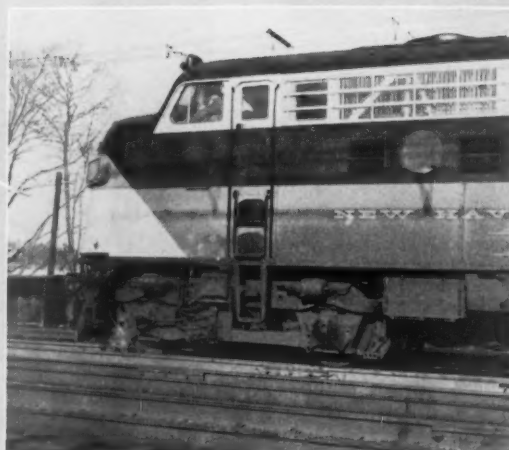
IN GRAND CENTRAL diesels can't be used; engine switches to third-rail current. NY Central all-electric is at right.



VERSATILITY is shown as locomotive goes diesel-powered through electrified territory with third-rail power optional.

NEW HAVEN'S TWO-UNIT 3,500 HP FL-9 LOCOMOTIVE

Length between coupler faces	
(Two A units), ft. in.	117-4
Overall wheel base, ft. in.	105-0
Maximum width over cab steps, ft. in.	10-6
Maximum height over exhaust stacks, ft. in.	14-8
Number of third-rail shoes	8
Overhead 660 volt, d-c collector for terminal use	2
Third-rail operating voltages	720 volt. d-c max.
	600 volt. d-c nom.
	400 volt. d-c min.
Driving wheels, number and diameter	16-40 in.
Gear ratio	58:19
Maximum total loaded weight, lb.	580,000
Maximum total loaded weight on drivers, lb.	464,000
Fuel, gal.	2,400
Water for train heating, gal.	2,600
Sand, cu. ft.	32
Lubricating oil, gal.	400
Engine cooling water, gal.	452



FL-9 combines diesel and third-rail electric power

The Electro-Motive Division of General Motors has added a new model to its line of standard locomotives. The FL-9, four feet longer than the standard FP-9 passenger locomotive, contains all the equipment necessary to make it a full-range electric as well as a diesel. Each 1,750-hp unit has a maximum speed of 89 mph and is equipped with a 16-cylinder 567C diesel engine and four D47 traction motors.

Thirty of these diesel-electric-electric units are now in service on the New Haven. Tests have been conducted with them on the New York Central and the Pennsylvania. The FL-9 can pull standard passenger or freight trains and is designed to enter and leave direct-current third-rail territory without slowing down to change from diesel to straight electric operation and vice-versa. It can operate in both Grand Central and Pennsylvania stations in New York.

The New Haven is operating its thirty units as fifteen, 3,500-hp, two-unit locomotives between Grand Central and Boston. This territory is electrified with 600 volts d-c from Grand Central to Woodlawn, in the New York City outskirts, where the New Haven trains split off New York Central tracks onto their own.

The line is 11,000 volts a-c Woodlawn to New Haven, and is not electrified between New Haven and Boston. The locomotives operate as 600 volt d-c electrics out of Grand Central, and then as regular diesels to Boston.

The New Haven's electric locomotives and multiple-unit cars used on the 72-mile line from Grand Central to New Haven

are designed to operate from the New Haven's 11,000 volt a-c overhead. Like the FL-9's, they operate on 600 volts d-c when in the third-rail territory. They make the d-c to a-c, or a-c to d-c, transition without stopping. Baldwin, Budd and Fairbanks-Morse have built diesel-powered, lightweight equipment for the New Haven which also operates from third rail in the Grand Central area.

The FL-9 design depends on building the locomotive so its traction motors can draw power directly from the third rail when the diesel engines are shut down. Modification of the dynamic braking resistors for traction control and some newly developed automatic controls did the trick.

The engineer controls transition from diesel to electric operation at the regular control stand. When about ready to leave the third-rail area, the diesel engines are started while the train is at speed. Another set of controls cuts off the third rail and power is then drawn from the diesel generator. When clear of the third rail, the shoes are folded up and the train operates as a normal diesel.

Newly developed Flexicoil trucks, with a double coil-spring arrangement instead

of swing hangers for lateral control, have been used to make possible the application of third-rail pickup shoes. Special ears on the journal boxes hold the third-rail shoe beams which are mounted between the boxes on each side of each truck. The spring-loaded third-rail shoes, operated by air, swing on a shaft mounted on a bracket bolted to the shoe beam. A three-axle truck is used on the rear of unit to keep within the maximum axle loading of 58,000 lb on structures leading into Grand Central. The middle axle is an idler. Each outer axle has a traction motor. The front truck has two axles, each with a traction motor.

The FL-9 accelerates automatically when operating from third rail. On a dial the engineer selects the rate of acceleration which will best avoid slippage, but will permit reaching speed in the shortest time. Once this setting is made, the throttle is opened. The automatic control then regulates acceleration without necessity of moving throttle back and forth to prevent slippage.

When the FL-9 operates as a diesel, conventional power is furnished to the a-c driven traction motor blowers and cooling fans. When operating from third rail with the diesel engine shut down, a motor-generator set operates directly from the third rail. This provides a-c power for the traction motor blowers and d-c power for lighting controls. A special 600-volt d-c motor drives an air compressor for third-rail operation.

Train heat is provided in each unit by a conventional, oil-fired 2,750 lb per hr steam-heat generator.

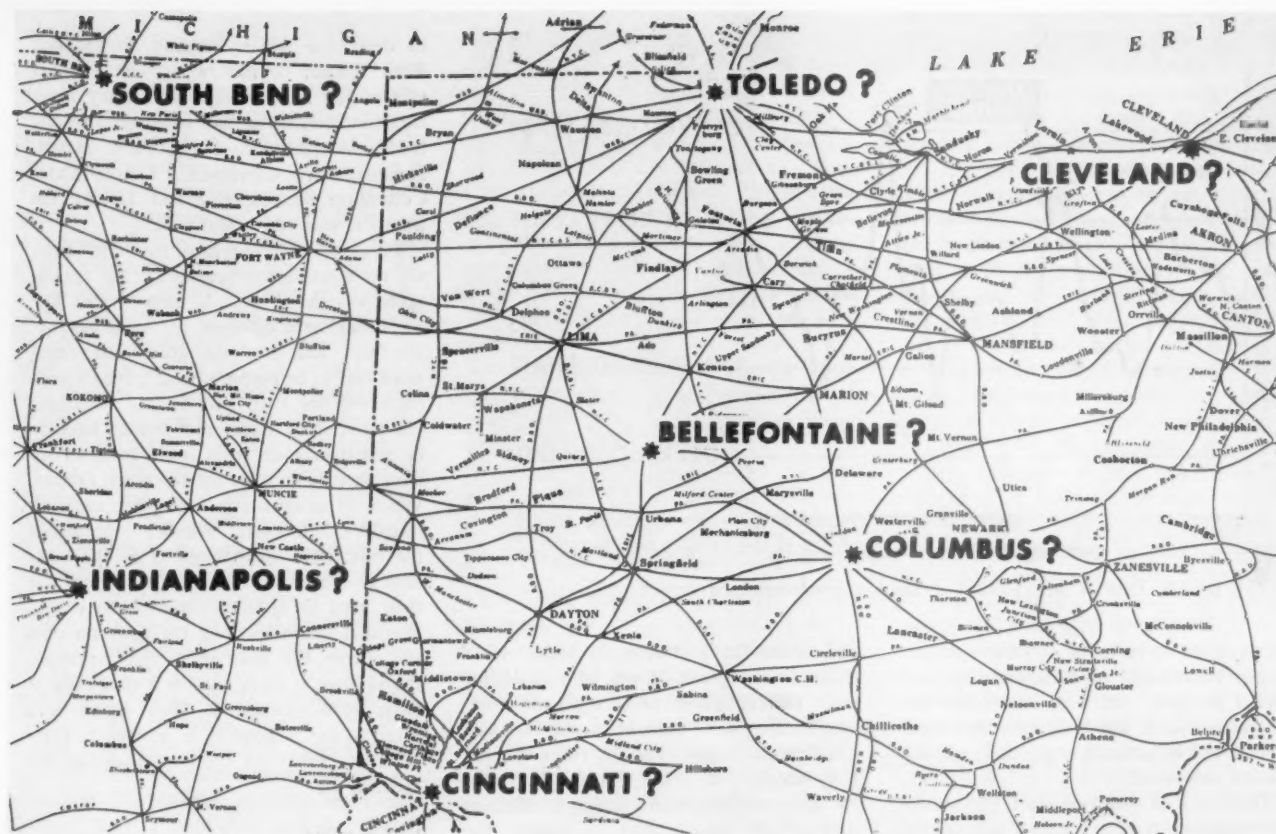
NEXT WEEK

Robert R. Young Yard

A point-by-point report on the NY Central's new installation.

AND:

Training for the New Yards



Where Should the New Yard Go?

Operations research can help railroad managements decide. It offers a fine balance scale to measure the key factors. Here's how the New York Central worked with an "OR" team before picking the site for a new yard.

Although operations research applied to railroad problems is not new, it is still not well known. One drawback to wide acceptance is the scientific jargon usually used to explain operations research, a barrier that hides its value from the busy reader. Here is an account of "OR" at work on a typical railroad problem.

Over a period of two years, the Graduate School of Industrial Administration at Carnegie Institute of Technology has been engaged in a series of operations research projects in railroading. Professors Edwin Mansfield and Harold Wein have reported some of the results.

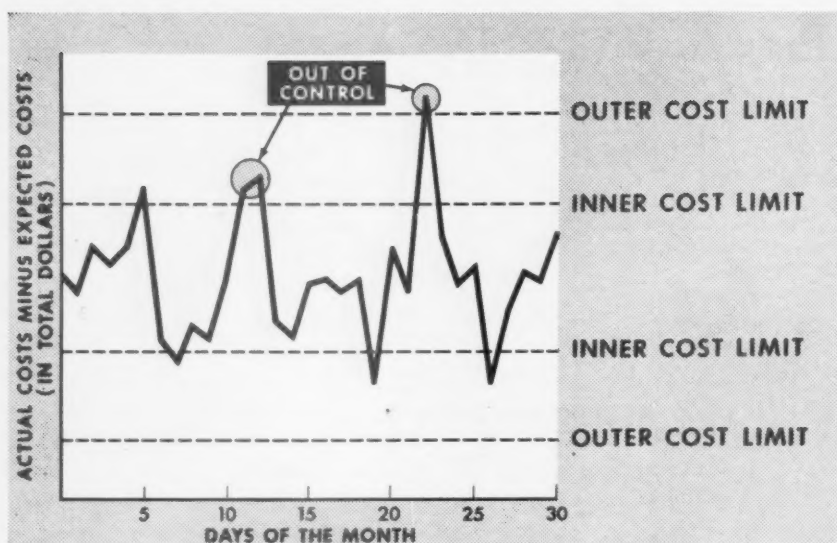
From a paper submitted to *Railway Age* by Edwin Mansfield and Harold Wein—rewritten here by Roderick Craib.

The cooperating railroad in this case was the New York Central. Five men from Central's transportation and economic research group and its transportation department, Fred N. Nye, C. E. Link, S. H. Keyes, R. H. Nadle and L. E. Saunders, together with Professors Mansfield and Wein, formed the team. The major project—location of an automatic hump yard planned for the Central's Southern District—was suggested by NYC President A. E. Perlman. The Westinghouse Air Brake Company had provided a grant to Carnegie Tech to finance the project. The New York Central, besides providing some of the team's manpower, furnished necessary operating data and clerical assistance. In addition to the five NYC members of the "OR" team, NYC officials from Mr. Perlman and Senior Vice-President Karl Borntrager on down

were available for consultation throughout the project.

Advice and backing from top management are indispensable in operations research. The emphasis is on seeing the problem as a whole rather than from the necessarily restricted point of view of a single department. For this, support of top management is necessary but is not in itself enough to guarantee success. The several specialists in the group must first become a team. The scientific members contribute specialized knowledge of techniques; railroad members contribute guidance and overall knowledge of practices and objectives of the road.

The usual choice of a site is a process of trial and error based on essentially local savings. An estimate is made—by deducting operating costs of the new comprehensive facility from those of the



EACH DAY'S COSTS are plotted against a predetermined figure.

present yard or complex of yards—of the savings that would result at existing yard sites if the new yard were substituted for the present yard. The location where local savings will be greatest is generally chosen for the new yard.

This kind of analysis does not necessarily result in the greatest advantages from the new yard. In addition to purely local savings, there are also potential district or system savings. If a new yard permits finer classification than an old facility, classification cost can be cut in other yards. Changes throughout the system, in train routes or patterns, and classification groupings that reduce the total amount of switching required are another possible saving. If the new yard permits running longer trains, there may be savings in crew and power costs.

The extent to which the full potential savings are realized may differ according to the location of the yard. All of these factors should be weighed and evaluated in picking the yard site, yet none of them is systematically taken into account when yard location is determined on a purely local basis.

The operations research team puts down on paper, in as exact terms as possible, all available data about yard operation

and costs. On a district or system-wide study, these break down into line-haul costs, switching costs and freight car costs. The hauling costs include crews, fuel and diesel maintenance. Freight car costs are not merely per diem charges but also the broader expense of keeping a sufficient number of freight cars to handle the prospective volume of business.

For the Big Four—Central's Southern District—study the New York Central supplied the "OR" team with a list of feasible sites for a new yard. For each site, the available traffic volume between each origin and destination on the system that might traverse it was provided. The railroad also listed any changes in classification policies and train routes (for all yards and routes) that might be expected if a new yard were located in each of the alternative sites. Where available, facts concerning past expenses in the locations under consideration were also provided.

A traffic flow pattern prepared a year earlier by OR team member Fred N. Nye, head of transportation and economic research for the NYC, was used. This pattern showed the origin and destination of all cars entering Big Four yards and whether they were switched in the yards.

The specific task of the "OR" team was

to determine which location on the Big Four district of the New York Central offered the most advantages. Many locations on the district had some advantages: St. Louis, Mattoon, Paris, Terre Haute, Indianapolis, Cleveland, Cincinnati, Columbus, Bellefontaine and Toledo; the question was which was best.

From the data provided, the "OR" team set up equations representing the system costs associated with a train route. The equations were different for each alternative site, and separate groups of equations had to be prepared and solved simultaneously for each site. In the equations the number of trains that would have to be run over each train route to maintain existing volume were the unknown factors. When an answer was found for each alternative, the lowest number represented the least train movements to do the business of the entire district. This figure was then used in another equation to obtain the total line-haul costs for each possible site. From the solution to this equation, the savings at each site on a district-wide basis were calculated. This figure was given to the railroad to be related to capital costs for yard modernization at the specific site.

What the Figures Showed

Note that there is a considerable difference between each of the sites with regard to the costs in the three categories: freight car, switching, and line-haul. Using one criterion only, each of the sites has a claim to being picked as the best location. Figures showed the best theoretical site to be site 3, assuming that capital costs are not much higher than elsewhere. Site 3 shows a total saving of about 10%, compared to 5% for site 2, and 3% for site 1. If freight car costs were the only factor considered, site 1 would be 5% better than site 2. With the volume of business in effect, a yard at site 3 would save about \$3,300,000 a year. This is more than \$1,500,000 greater than the theoretical savings at site 2.

Site 3 was not the location the railroad had favored before the study. The Big Four study was a pilot project, undertaken to demonstrate the value of operations research. It was not expected to dictate the yard site. Before the final decision on location, the availability of land and relative capital costs less salvage of yards at each alternative location must be incorporated in the study. These capital costs—depending on the particular design of the yard, the complex of industries to be served locally, the land values at each location, the difference in construction costs, terrain, tax features, and other purely local factors—were not incorporated in the pilot study, which based its

Total District Costs, from Each of Three Alternative Locations for an Automatic Yard

	District Freight Car Costs	District Switching Costs	District Line-Haul Costs	District Total Costs
Present District Costs (= 100%)	100.0	100.0	100.0	100.0
New Yard at Site 1	90.7	96.1	98.3	96.8
New Yard at Site 2	95.8	88.6	99.9	95.2
New Yard at Site 3	96.8	77.4	97.1	89.6

conclusions on the assumption that capital costs would be approximately the same for each location. The railroad itself cannot know the capital costs accurately until detailed engineering proposals for each site are drawn up.

As may be imagined, "OR" involves many computations before its formulas are solved. For most of the complex problems, a medium-size computer should be large enough for all but very large trunk line operations. For the Big Four yard project, analyzed on a district basis, a computing machine was not required.

The research necessary to produce the primary data about traffic flow and detailed costs involves a good deal of labor, in this case about three man-years. Many railroads, however, are more fortunate than some other industries in this respect, since railroads, as part of their routine procedures, are already compiling much of the necessary information.

The procedure developed to determine the best yard location can also be helpful in exploring other yard problems, the effects on overall costs of a change in the classification groupings in yards, for example. The same procedure could also be used to examine system costs involved in changing the number of trains on some routes, or of eliminating one or more yards in a district. One of the benefits of operations research is the adaptability of results in one field to some field quite different.

Crew assignments in a yard affect yard costs directly and at least indirectly affect overall railroad performance. The yardmaster works pretty much by educated guess. In trying to develop a better basis for scheduling yard switching assignments, the team came up with an equation for determining the most economical schedules. The chief problem for the yardmaster is to strike a balance between incoming cars and crew productivity. In terms of his estimate of the

number of cars expected, he has several choices: he can vary the number of crews and cars to be switched; he can maintain a constant number of crews, vary the cars to be switched and pay overtime for additional switching; he can switch a constant number of cars with a constant number of crews and let the backlog pile up; or he can use a mixture of all of these approaches at once. The last possibility is the one yardmasters generally prefer. The best mixture depends on the costs involved.

Relevant factors are: crew costs, costs resulting from changing the number of crews (such as penalty payments or occasional use of less productive crews) and the per diem costs of backlogs of unswitched cars. The effect on service accorded the shipping public is also a factor but difficult to evaluate in terms of direct costs.

The "OR" equation takes some of the guesswork out of picking the mixture. When the yardmaster can predict the number of cars to arrive with reasonable accuracy, the equation gives him the optimum cost balance between the number of crews required and the number of cars to switch. The pilot study indicated that this approach was valuable.

Checking Up on Costs

The problem here was to set up a table that would show the daily variation above or below normal for the costs of a given yard and would indicate quickly when costs are out of control. Inter-yard comparisons are not particularly helpful in this respect because yard layouts vary, traffic conditions differ, and climatic conditions affect yard operation. The basic problem is, of course, to decide how high costs should be before they are "out of control." Statistical techniques helped solve the problem.

A chart was designed to show two

things: days when costs are unusually high or low for the yard output, and a series of days when costs are repeatedly higher than normal for the output. The chart is based on actual data concerning yard output and costs for the given yard. Daily cost figures are checked against a predetermined figure for the yard's performance. The costs used include all money costs incurred in the yard, except for fixed charges and repair, maintenance, storage and vacation costs. Yard output is measured by the number of cars switched and the number of cars delivered and picked up at interchanges and industrial sidings.

The difference between each day's actual costs and the calculated figure is plotted. Whenever a day's plot falls outside the outer limits of the chart, or two successive days fall outside the inner limits, costs are "out of control" and an investigation should be made. On the sample shown, days 11, 12 and 22 are out of control and should be investigated.

This chart was established in a large midwestern yard on an experimental basis in the summer of 1956. Data for a 61-day period was gathered. Several months later the chart was used to check the performance of the yard for six weeks. In this period four days were found to be out of control, and the reasons for the poor (or good) performance were discovered. The original computations required about a week's clerical work in gathering the data, and another week by the "OR" team. Once drawn up, the chart involves a matter of half an hour's work to insert daily values. It tends to correct itself, in the sense that if a new relationship between costs and output develops, it will show on the plot. If this occurs the data can be recomputed within a day's time.

On this problem the railroad officials felt that the pilot study had turned up a promising approach, one that could, if a clerical routine were established, be applied system-wide.

"OR" plus other factors add up to a final choice

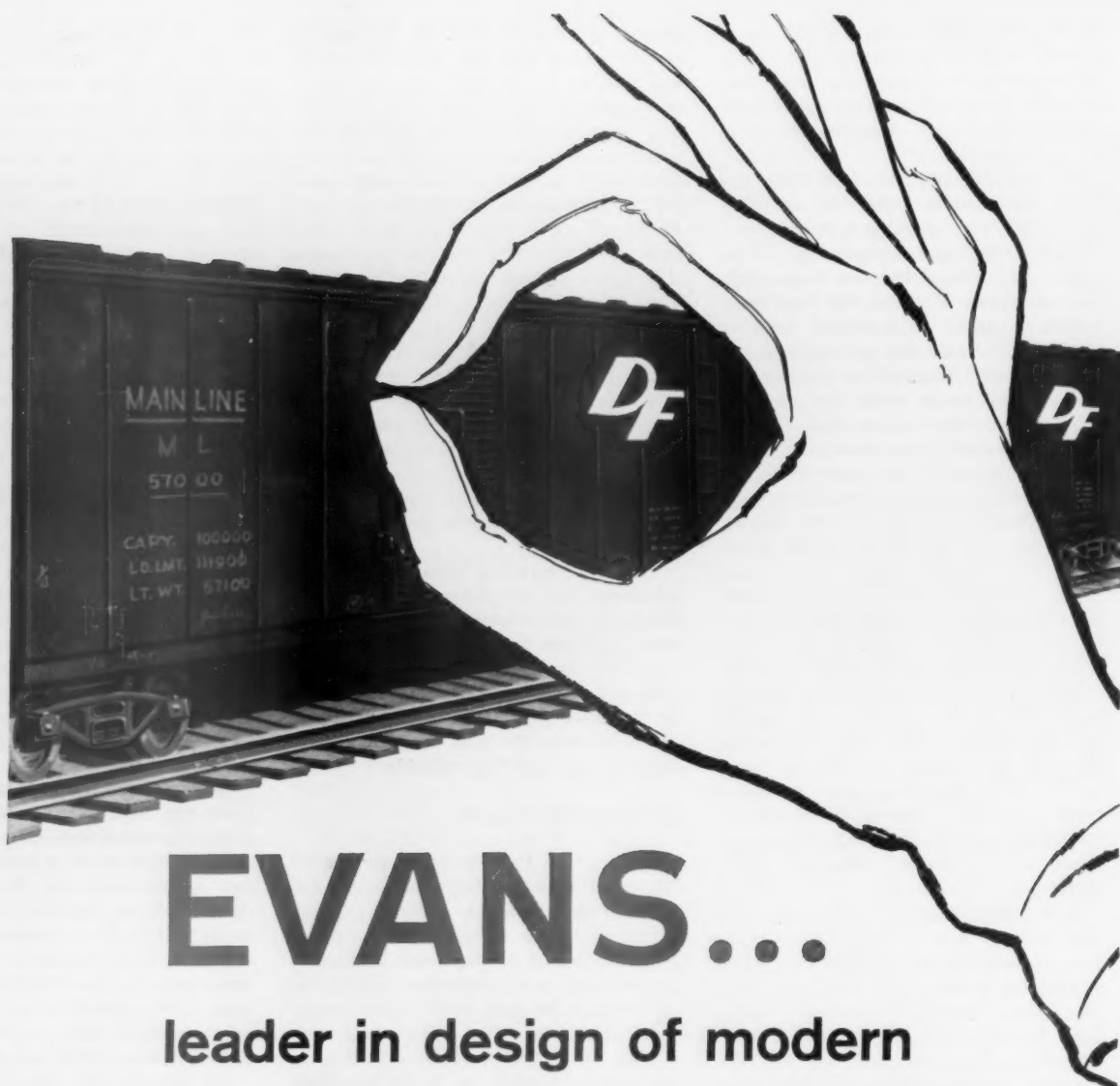
"Central was very interested in the conclusions arrived at and carefully evaluated them. They did no violence to our own thinking—indeed they confirmed our judgment to a substantial degree. However, Site #3—showing the greatest theoretical return based on the Operations Research study—did not receive management's approval. Site #2 (Indianapolis)—although showing less theoretical advantage—was selected because:

"1. Land and construction costs—and taxes forever after—are estimated to be substantially less, yet greater salvage value is provided from local yards to be discontinued. [These non-transportation

considerations must be separately evaluated, independently of the OR analysis.]

"2. It provides greater advantage as to interchange and for industrial work, which factors—because of their complexity and essentially local importance—were not incorporated in the Operations Research model. Carnegie Tech's report . . . made clear that these aspects too must be independently considered.

"In my opinion the Carnegie Tech study was well worth while . . . While we believe Site #2 should be given priority, we look forward to the time when we can also tackle Site #3."—F. N. Nye, NYC.



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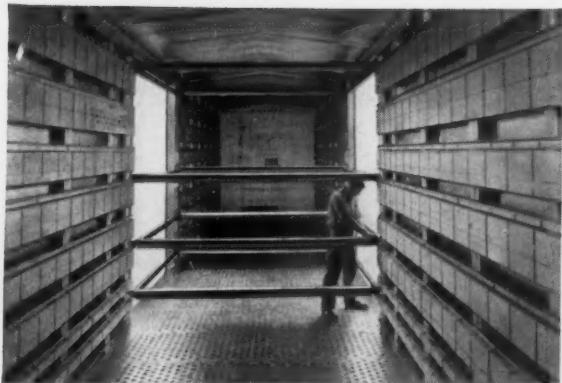
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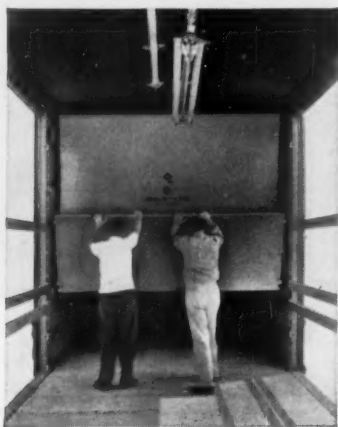
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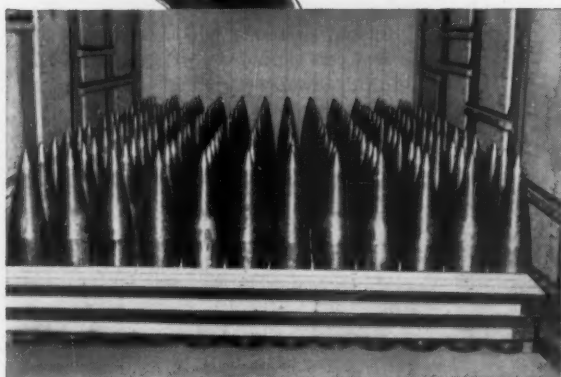
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AND SHIPPERS FOR MORE THAN FOUR DECADES



RAIL LINE runs 356 miles from Schefferville to Seven Isles. Chart shows relation of mines to ports and steel centers.

SPRING FLOOD problems are handled by upper-level pipes under Embarrassee river trestle, one big project. ▶



They're Still Building the Busy

The pounding of 13 million tons of ore traffic annually, handled in 125-car trains, would trouble any railroad. But put this load on a new line chopped through a sub-arctic wilderness and your problems multiply.

That's the situation on the 356-mile

Quebec, North Shore & Labrador. In service since 1954, it's a continuing challenge for construction forces.

Even today, when 125-car trains are moving 13 million tons of high-grade iron ore during a 165-day shipping season, the world's newest railroad is still being built.

The rock ballast finish is being placed over a five-year period. Line changes are under construction; cuts are being widened; ditches are being finished; timber bridges, thrown up in a hurry to get the line open, are being replaced with large-diameter culverts.

In four years the builders:

- Constructed 356 miles of main-line railroad through a wilderness, complete with passing tracks and terminal yards.

- Operated and maintained over this wilderness the largest civilian airlift in history, which, in 27 months, handled 138,700 passengers and 85,172 tons of freight.

- Built and maintained base camps and way stations to house and feed 6,900 men.

- Constructed dock facilities to receive and ship at least 10 million tons of ore a year.

- Planned for and started construction of two new town sites.

- Built two hydro-electric plants and necessary transmission lines.

- Prepared all the facilities necessary to operate open-pit iron-ore mines.

Today, seven years after construction started, modern civilization has a strong foothold in the Quebec-Labrador wilder-



LARGEST WATERWAY opening ever put under a railroad using pipe culverts is under construction. Nine 144-inch pipes were assembled in yard (rear).



QNS&L

ness. Those who visited the terminal points of the railroad at Knob Lake (now called Schefferville) and Seven Islands in the early days would have a difficult time recognizing the cities now. But there is still an air of feverish activity and they're still building—new homes, stores and offices.

The QNS&L, a subsidiary of the Iron Ore Company of Canada, also is "still building"—but carrying on full-scale operations at the same time. These operations include running as many as a dozen trains each direction over a single-track line in a 24-hour period. No small part of this construction schedule is the replacement of all but two bridges and the improvement of drainage generally along the main line.

From the very beginning of construction, drainage was a knotty problem. Water was everywhere—lakes, swamps, small streams and major rivers. The line follows generally the natural drainage pattern of the country. It crosses a narrow coastal plain just north of Seven Islands; rises into the coastal highlands along the valleys of the Moisie, Nipisso and Wacouno rivers, and follows the Magpie river to the height of land—2,066 ft above sea level. There it enters the Labrador plateau

(Continued on following page)



CLASS YARDS at Seven Islands were designed for roller-bearing cars. Ore is stored at left. Equipment repair building is in foreground.

They've Done More Than Build a Railroad

Developing the Quebec-Labrador area for what became one of the greatest private mining undertakings in history, opened another section of the globe to civilization.

Creating an industry and a community deep in the northlands, it also required construction of a mass transportation system.

C. E. McManus is the project manager for the Iron Ore Company of Canada; J. A. Little general manager for the QNS&L. He's running the railroad while B. M. Monaghan, chief engineer, and Marcel Michaud, bridge engineer, go on with their construction job.



ORE DOCK at Seven Islands is modern facility with deep water wharf for transfer of trainloads from Schefferville mines to vessels.

(Continued from preceding page.)

and runs along the northern-draining As-huanipi and Menihek lakes, crosses the Menihek dam, and finally follows the "Labrador Trough" through to its northern terminus.

Throughout this area there were no records of runoff, no stream gauging reports—in fact no drainage area determinations. This meant that all pipe culverts had to be installed by calculated guess, using site inspections and stream-level measurements to determine the size requirements. In all, some 16.5 miles of corrugated metal pipe culverts, ranging in size from 24-in riveted to 144-in Multi-Plate, were installed—an average of more than 20 culverts to the mile of main line. In addition to pipe culverts, 19 bridges were built.

Today, where practicable, these bridges are being replaced with embankments and pipe culverts. Ultimately, all but two of the bridges will have been replaced as part of the QNS&L's continuing construction improvement program. Trestle filling will make it possible to eliminate an expensive maintenance cost—a cost that is easily accounted for when one realizes that the QNS&L runs the heaviest trains operated on any railroad and at 40 mph.

Construction work at MP 174 and MP 176 provides good examples of this program. Bridge forces have recently completed an unusual trestle-filling job at MP 174 and are currently working on one at MP 176 under the supervision of a specialist from Armco Drainage & Metal Products of Canada, Ltd.

Two Unique Projects

At MP 174, fourteen 102-in diameter structural-plate pipes were installed in the latter part of 1955 to replace a wood trestle across the Embarrassee river. All pipes were installed skewed, but the center seven lines were placed at a different skew angle from those on the outside to correspond with the original bridge bents. Yet the spring thaw last year gave indications that these 14 pipes might not always provide enough waterway opening during times of extreme flood flow. It was therefore decided to install seven 60-in Multi-Plate pipes on top of the existing pipes as a "safety valve" during periods of peak stream flow.

Currently underway at MP 176 is another bridge-replacement project which involves a change in alignment and the

installation of nine 144-in diameter structural-plate pipes to bypass a timber trestle. Realignment also will eliminate one of the existing curves on the line. These two bridge-replacement projects are unique. They represent the first and second largest waterway openings ever provided by culverts under a railroad anywhere.

Soil conditions also have contributed much to the drainage problems on the QNS&L. At places along the first 100 miles of the line deposits of marine clays and silts were encountered during construction. These still pose difficulties where sidehill cuts were made. In the presence of water they become fluid and unstable. In the vicinity of MP 11, considerable trouble has been experienced with slides of this material due to the presence of hydrostatic water behind the cut slope. At the present time horizontal tubing drains are being pushed into the slope in an attempt to intercept this water.

These same silts have also caused trouble under the track. Alternate freezing and thawing force moisture into the material on the cut slopes and heavy flow occurs from these faces. This flow moves into the roadbed or mingles with the ballast. Frost heaves are the natural result.

Railroading



After Hours with *Jim Lyne*

WHY "COMMON" CARRIER?—Bill Scott of the Railway Association of Canada does the best job of anybody I know in bird-dogging everything worth while in print on railroad economics. He's just lent me a most informative pamphlet entitled "The Obligation to Carry"—an English work by A. M. Milne and A. Laing.

The authors go back into origins of the "common carrier" idea—nowadays so troublesome to the railroads in meeting competition of the "uncommon" variety. Well, back in medieval times there were a lot of services that had the obligations of this "common" status. There was the "common brewer," the "common innkeeper," and so on. In those days of small cities and poor transportation, almost any tradesman had a local monopoly of his craft—and the law, accordingly, set down rules to prevent abuse of his monopoly power.

As cities grew and transportation improved, every city got several tradesmen in every calling—and the job of regulation of service and price was taken over by competition. Governmental regulation of the "common" status withered away—in almost every area except transportation. Now, however, competition is also available to do most of the regulatory job in transportation, but the "common carrier" status hangs on, through inertia.

S. R. ADVERTISING—I've been admiring that current Southern Railway ad, entitled "This Is the End of the Line for You, Cry-Baby!"—not primarily for the caption so much as for the virile text over the signature of President Harry De Butts. He points out that railroading is a volume business and his company is out to get the volume.

He adds that the Southern isn't going to quit kicking about inequitable treatment from the government—but that is something different from singing the blues. Despite all obstacles, SR

proposes to produce the best service it can, at lowest cost. An excellent goal for any railroad.

BIG DOINGS IN PANTACO—In the Mexican news magazine "Tiempo" I read an account of a big celebration they had of the opening of the National Railways' big freight station at Pantaco—a part of the great Valley of Mexico terminal improvement. Those who spoke included the president, Don Adolfo Ruiz Cortines, National Railways General Manager Amorós, Benjamin Méndez (general manager of the Pacific Railroad) and Nelson Dezendorf, general manager of the Electro-Motive Division of GMC. Here is what Nels said (according to Tiempo):

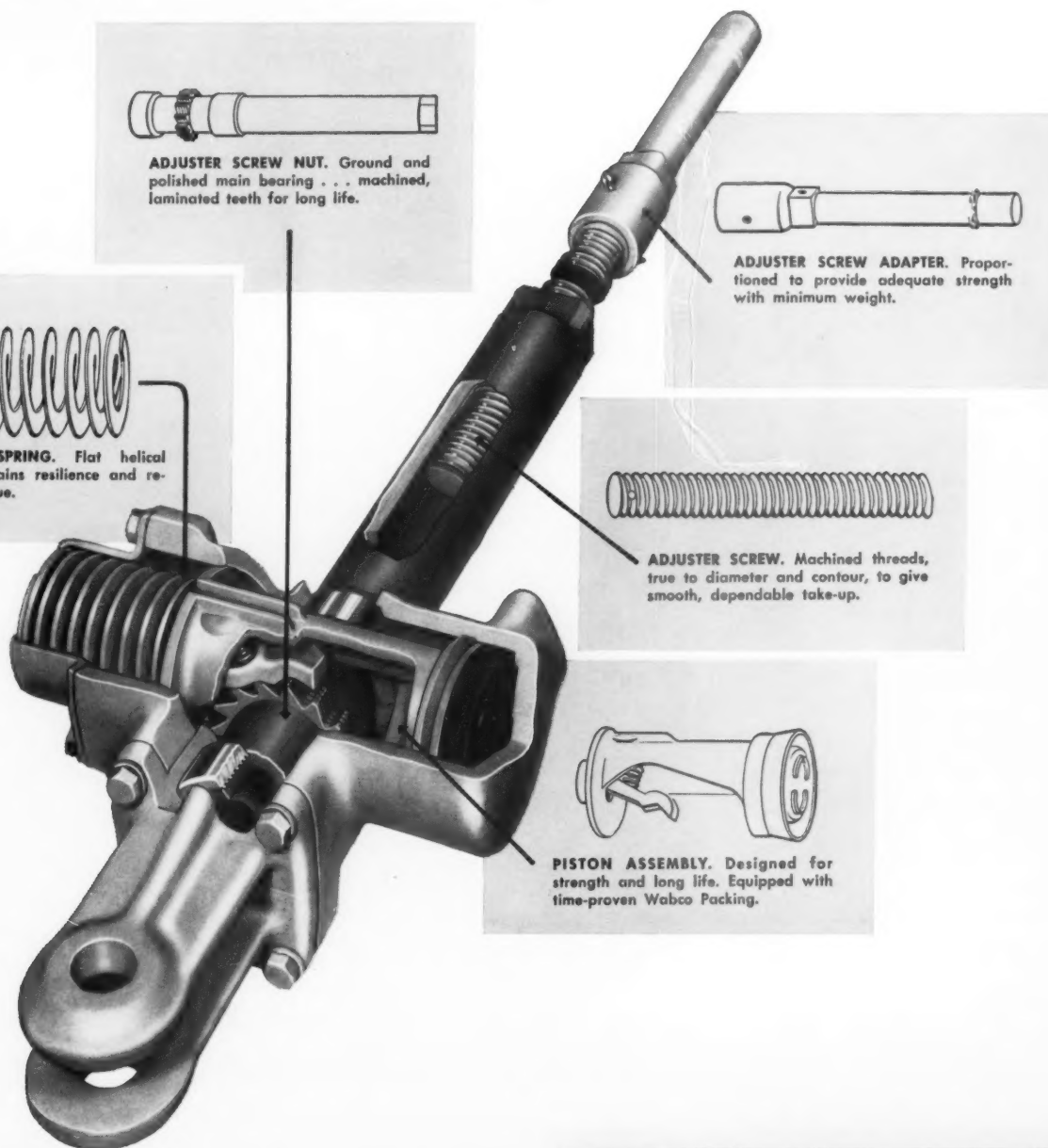
"Estoy impresionado por la novedad de conjunto. Opino que rara vez se ven instalaciones, en tan granda escala; se ven, sí, innovaciones parciales, pero no con frecuencia se observan tan bellamente realizadas."

I would guess that what Nels said was that he thought the new layout was quite complete. He tells me that Mario Montero, EMD's representative in Mexico, deserves the credit for converting his English into Spanish.

RR GOBBLEDYGOOK—It isn't only bureaucrats that use involved and formal language in conveying information—that would be better understood in simple words. Railroad letters sometimes are little better.

Jim Schultz of the Long Island has shown me a bulletin to trainmen on the subject of watching temperature controls in cars—to keep them from getting uncomfortably hot (or cold). Instead of the stilted wording of the usual bulletin of instructions, this one is done in simple words, with cartoons to illustrate each point.

Here are the Reasons the Type "D" DOES THE JOB - STAYS ON THE JOB



Each of the simple, rugged operating parts in the Westinghouse Type "D" Slack Adjuster is designed to stand up under long, punishing service. The Type "D" has the same fine engineering you find in Westinghouse Air Brakes . . . the same basic design principle that has been proved in many years of passenger service.

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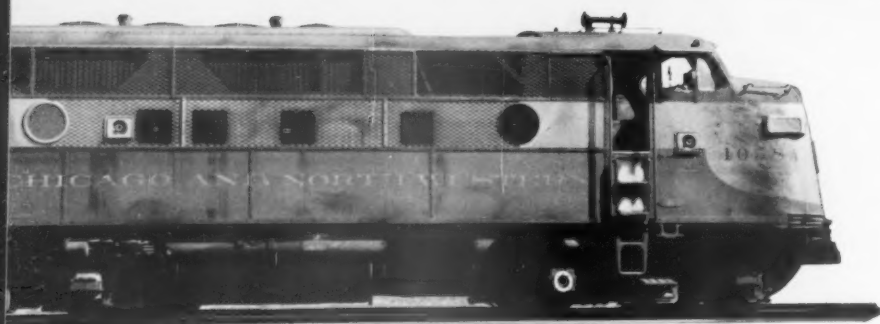
Westinghouse

Type D

Pneumatic-Automatic

SLACK ADJUSTER

for Freight Cars



Working on a planned program covering ten months, the North Western turned in and received each month three to four locomotives, thus minimizing out of service time. At left is one ten-year-old freight unit as it was turned in to Electro-Motive. Above is one of the new General Purpose units at work.



New locomotives for old . . .

The Chicago and North Western Railroad has turned in thirty-two F3 freight locomotives on the purchase of thirty-two new General Purpose locomotives containing certain remanufactured parts.

The value of the old freight units (worth nearly 40% of their original cost) was applied against the purchase of the General Purpose locomotives that embody all the improvements in materials and design of the past ten years.

This is the second phase of the North Western's *power renewal plan*. The first involved their oldest model (FT) freight locomotives.

How this or similar plans might benefit your roads' future can be had in detail from your Electro-Motive representative.



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Can you justify the "NO's" on this chart . . .

. . . to the people who say
the railroads are "crybabies."

	Common carrier trucks	Private trucks	Air lines	Barges	Railroads
Roadways financed at public expense?	YES	YES	YES	YES	NO
Freedom to drop unprofitable services?	YES	YES	NO	YES	NO
Terminals provided by taxpayers?	NO†	NO	YES	NO	NO
Terminals tax free?	NO	NO	YES	NO	NO
Roadways maintained by public?	YES*	YES*	YES*	YES	NO
Traffic control systems provided at public expense?	YES	YES	YES	YES	NO
Free of requirements to supply standby capacity for Post Office Department?	YES	YES	YES	YES	NO

* Expenses are defrayed in part by users fees; airlines have no "roadways," of course, but use elaborate terminals and costly traffic control systems.
† At least two cities have publicly-owned truck terminals. Barges, too, frequently use city or state owned terminal facilities.

You personify railroading to the non-industry people you know. To them you are "Mr. Railroad." It makes no difference whether you are the top man or one of the many people who make up railroading as the public knows it. You represent the industry to them. How well are you able to speak out and defend your industry?

As a spokesman for the industry, you should be able to explain the precarious position of railroading to your friends . . . your local government . . . your state and federal representatives.

Can you explain, why railroads are going deeper into debt on commuting services while federal and state financed highways are making it even more uneconomical to compete?

Can you explain, why railroads are taxed more heavily to make up for loss of tax ratables to communities when a new publicly financed speedway is constructed parallel to a railroad right-of-way?

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MULTILEVEL LOADING

Installation of DF equipment in cars like these gives the Reading built-in flexibility. These cars are used for shipments of automotive parts. View at right shows the ease with which the equipment can be adapted for odd-size packages. What's in it for shippers? Greater certainty that their freight will reach destinations intact. And what's in it for the railroad? Bolstered relations with customers, financial savings through reduction of damage-in-transit claims, and traffic business generated by being able to offer shippers the right car for their freight.



Reading Cuts Damage with DF Cars

Proper equipment—plus carefully nurtured shipper cooperation in its proper use—can cut damage claims. That fact has been demonstrated by the Reading's experience in using DF cars to combat damage in stop-off shipments of foodstuffs.

For many years, the railroad was plagued with excessive loss and damage claims on movements of that nature, particularly off its Gettysburg & Harrisburg branch. Volume is small—40 to 50 cars monthly during each annual shipping season. But the business is attractive. Loading is heavy—preserved apples and peaches, apple butter and catsup, in tin cans and glass jars. And haul, by rail if not by Reading, is long—from Gardners, Peach Glen and Biglerville, Pa., to country-blanketing destinations, including the Pacific Coast.

Analysis of the previously unsatisfactory claim pattern showed that 80 per cent of all cars involved made from one to three intermediate stops before reaching final destination. Losses were greatest in these stop-off cars. Further study showed that: (1) Shipments generally consisted of pack-

ages of various sizes; (2) in most cases, some packages of each size were unloaded at the first and each subsequent stop-off point; and (3) packages remaining in the car for further movement seldom were braced or secured properly.

First step in solving the problem was to appoint a special committee of railroad

operating, transportation, and freight claim representatives. This committee visited Gettysburg & Harrisburg branch shippers to obtain their cooperation in better blocking and bracing. Initial reaction was one of indifference. They were not interested, area shippers said, because the additional

(Continued on page 28)



EXPERIMENTS with DF cars sold foodstuff shippers on their use.

✓ Here's STANDARD'S responsibility to the railroads at work...

Now! Cut down costly end lining repairs with new



LINE-RITE, new low maintenance End Lining, is another development that reflects Standard's "responsibility to the railroads"

...the creation of new products to make your operation more efficient, more profitable.

LINE-RITE is assembled metal and wood lining that greatly reduces maintenance costs—even cuts down the need for maintenance through added strength. Infestation hazards are reduced also. The end result is more cars available for high-class lading.

Maintenance costs slashed—the dove-tailed metal socket running from the end lining retainer to the floor of the car provides solid backing for the entire length of the board... locks each board positively and securely in place. New LINE-RITE virtually eliminates the costly operation of replacing broken and

missing end lining boards.

Added strength through distribution of impact—the assembled metal and wood lining gives additional strength to the end of the car by distributing impacts over a larger area and allows the corrugations in the outer steel end to exert resistance to impact as a unit... not only are maintenance costs slashed but the need for maintenance is greatly reduced.

Infestation hazard reduced—the continuous steel member, after proper application, provides a positive wall which effectively blocks the infiltration of flour and grain into the space behind the lining.

More high class lading cars—you'll have many more cars available for profitable high class lading because LINE-RITE will reduce the number of cars out of service... you'll have less maintenance at lower cost and damage to lading will be minimized.

STANDARD

RAILWAY EQUIPMENT MANUFACTURING COMPANY

General Office: 4527 Columbia Ave., Hammond, Ind. • New York • Chicago • St. Paul • San Francisco



LINE-RITE

...low maintenance
End Lining

Here's how LINE-RITE works!

SECTION SHOWING CONTOUR
STANDARD VERTICAL END LINING
(1 1/4" GA. MATERIAL)

3 1/4" 2 1/4" 3 1/4"



NEELSON STUD AND FLUSH NUT OR EQUIVALENT

STEEL END CORRUGATION

The interior surface of each end of the car is covered by four metal panels formed to provide alternate dovetailed sockets for retention of the end lining boards. Each metal panel, covering approximately one-fourth of the end area, is held in place with welded studs and a new flush type round nut. This fastening method allows easy removal of the lining in quarter sections for repairs or replacement of boards. No furring strips need be used and cheaper grades of lumber have proved adequate as inserts in the dovetailed sockets. The wooden inserts provide an adequate nailing area and greatly reduce condensation problems.

LINE-RITE has been tested
and proved in over 2500 cars. Ask your
Standard representative for details.

(Continued from page 25)

labor involved would represent extra cost.

By continuing its activity, however, the loss and damage prevention committee finally persuaded some of them to experiment with DF cars. While this did not entirely eliminate all damage, the immediate reduction in claims was so pronounced that shippers themselves quickly recognized the advantages of the new equipment. Many of them have now been sold to the point where they would be willing to ship substantially all their traffic in DF cars if enough were available.

Potential advantages from shipment of canned or bottled foods in DF cars can be realized, of course, only if shippers—and

intermediate consignees—make proper use of interior blocking equipment provided with such cars. Toward this end, railroad freight service inspectors and sales engineers of the Evans Products Company—DF manufacturers—have made special efforts to see that shippers using this equipment are fully acquainted with proper application of interior fittings.

This includes instructions to the effect that any fittings not required for a particular load should be properly stowed in the car, and not left at the station or on shipper's platform. This, the railroad reports, is now "pretty well" complied with. The rare failure is the exception which proves the rule of general observance.

The highly satisfactory results obtained from use of DF cars by shippers on the G&H branch is reflected also in the use of similar cars by other shippers at other points on the Reading. While claims resulting from damage to loading in transit have not wholly disappeared, they have been substantially reduced. In comparison with claims received before DF equipment was put in use, the monetary loss has almost disappeared—which benefits not only the Reading, but other railroads as well.

The Reading presently owns 186 DF cars. They are not specifically assigned to Gettysburg & Harrisburg branch shippers, but are furnished to the extent that their number permits.



MIXED LOAD of floor covering from Massachusetts plant to California points is set up for stop-offs en route.



PAPER-BAGGED MATERIAL is loaded at Hercules' Savannah plant.

Shippers Join RR Fight on Claims

In working to reduce the annual bill for damage claims, roads like the Reading (p. 25) are not alone.

Shippers cooperate; a number of larger ones have pioneered their own research in efforts to trim damage to lading. To them, the matter is one of customer satisfaction.

Here are two cases in point: Bird & Son, a building materials manufacturer, and Hercules Powder Company, a chemical producer, both were troubled with damage problems—Bird & Son on interplant shipments of insul board planks, and Hercules on items like turpentine and drummed pine oil. Field studies were made, embracing, in each case, the whole traffic complex. The research included test shipments in DF cars. Now both companies use all such cars they can get, reportedly with excellent results.

H. W. Jervis, traffic director of Hercules, says his company has experienced a better than 90% drop in damage

claims since using the DF equipment. The company averages around 15 cars a month in such cars, would like to use more if they were available.

"We save from \$300 to \$350 in freight charges per car in shipping the higher 70,000-lb minimum to one destination . . . one account that switched to trucks is back on the rails . . . stop-over cars to the West Coast are now arriving in top condition," Mr. Jervis reports.

S. C. Traudt, industrial engineer for Bird & Son, headed his firm's probe of damage on movements of insul board from a plant in Rhode Island to Chicago. He used impact recorders first, fixing the time and location of any shocks in transit. Turning to the DF idea, Mr. Traudt found these cars not only halted the damage loss but provided an extra shipping bonus.

The company is getting full benefit of the 80,000 lb minimum. In addition, a strapping arrangement was worked out to permit fork lift loading and unloading.

How Long Should a Freight Train Be?

You may remember that in the February 10 issue most of our space was taken up with the question, "how can railroads utilize locomotives better?" Some answers were taken from the proceedings of a recent meeting of the Railway Systems & Procedures Association. Well, here's some more "dope" on this subject from the same source, but from a different angle. The angle here discussed is the possibility of getting better utilization through running shorter or longer trains. A couple of Operations Research men from Case Institute, Russell L. Ackoff and Maurice W. Sasieni, were the authors of the paper from which the following excerpts were taken.—G. C. R.

"Because motive power is a part of an integrated transportation system its use cannot be modified without affecting significantly many other aspects of the system. For example, if the locomotives in a system are retained and the volume of traffic does not increase, locomotives would be used for more *time* (italics mine—G.C.R.) if the length of trains were decreased. This in turn would affect the operation of yards, and customer service or costs. There would be converse effects of less use of locomotives.

"As a bare minimum, then, consideration of locomotive utilization involves consideration of:

- Length of trains;
- Effects on classification;
- Effects on customer service and/or costs."

The authors then proceeded to a discussion of only one small slice of the problem—"... manipulation of train length in relation to the utilization of motive power."

"Manipulation of the length of trains, and hence utilization of motive power, can have two types of effect on the system: it can affect (1) operating costs and (2) time under loads of cars. Railroads seek to minimize both of these, but the system perversely relates these two performance characteristics at opposite ends of the economic see-saw; as one goes down the other goes up. It is necessary, therefore, to

seek a best 'balance' between these two performance characteristics.

"To accomplish this it is necessary to be able to weigh them in common units. Ideally, we would like to determine the dollar value of changes of time during which a car is loaded. Although we believe it would be possible to do so, it is clear to us, at least, that a considerable amount of research effort and cost would be required to realize this weighting. It is not reasonable to expect any railroad to support such research at present. The problem here, then, is to find suitable practical substitute performance objectives for the system."

Two possibilities:

1. Minimize the cost of operation while maintaining or decreasing current delivery times; or
2. Minimize delivery times while maintaining or decreasing current delivery times.

Shorter—but Oftener

Messrs. Ackoff and Sasieni pointed out that shorter trains and more of them undoubtedly would increase fuel, crew and maintenance costs. "But on the other hand the task of classification is simplified. With shorter trains freight cars will spend more time moving and hence fewer cars will be needed to carry the volume of the traffic currently carried. Furthermore the costs of classification may be decreased.

"This is all conjecture. The problem is to attach numbers to such considerations and to determine specifically what average length of freight train will minimize delivery time at no more than present operating costs. Assuming for the moment that this length can be found, how much additional business can be obtained by reduced rail delivery time at no extra cost?"

The authors estimated 19% of turnaround time is "available for reduction through running more frequent trains.

"Suppose we start by determining the frequency of through trains between two given cities which would match truck service. From a knowledge of rate of arrival at the point of origin for delivery to the designated destination the average 'design' length of train could be determined.

Next we could obtain, on the 'incremental cost basis,' the costs of haulage for the computed train length. The saving in classification costs resulting from through trains could be found.

"Apart from the direct shortening of turnaround time due to faster loaded trains it appears likely that with existing motive power such trains would have spare capacity for hauling returning empties. One reason for the relatively slow movement of empties is the low priority they receive; consequently, with locomotives and sidings loaded nearly to capacity with 'fulls,' empties often have to be dropped off or bypassed enroute, to maintain space for loads. Thus, more frequent shorter trains should result in savings in freight cars due to better turnaround times.

"Further, even where through trains, which could be used to handle the increased volume which should result, are not run, it is to be expected that more frequent shorter trains should reduce the delays in classification yards."

Later on in the RS&P session, in answer to a question Dr. Ackoff said:

"In one preliminary study of two cities that are currently getting overnight service by truck, we were able to show that by considerably shortening the train, trains could compete with the trucks and that only a small percentage increase in the business would pay the additional cost. . . ."

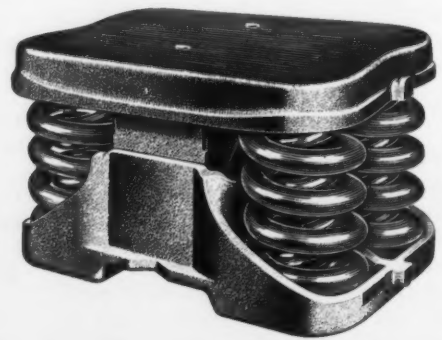
● In our next column, on March 10, we'll give you our answers to the car service quiz which we ran in this space January 27. So let's have those answers.

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

...and now the link

The B & O has just begun a long-term rebuilding program that offers a good example of how to get the *most* out of existing rolling stock. Cars suitable for rebuilding get a complete going over. Back on line, they're ready for many years of *more efficient* service.

More efficient, in large part, because ASF Ride-Control Packages are installed on many cars. The



with the nation"

is stronger than ever

B & O recognized that the Package was the next best thing to a Ride-Control Truck . . . that Packages offered the most economical way of accomplishing the objectives of the B & O repair program. As a result, these cars are ready for unrestricted use. And with the required 2½" spring travel, controlled *laterally* as well as vertically, they are easier on lading, easier on

the roadbed . . . easier on *themselves*.

This is more than a program of bringing older cars up to modern riding standards. It leads to modern service . . . modern *competitive* strength. See your nearest ASF Representative and find out how Ride-Control Packages can make an important contribution to your repairs program!

Bring your older cars up to modern riding standards . . . with



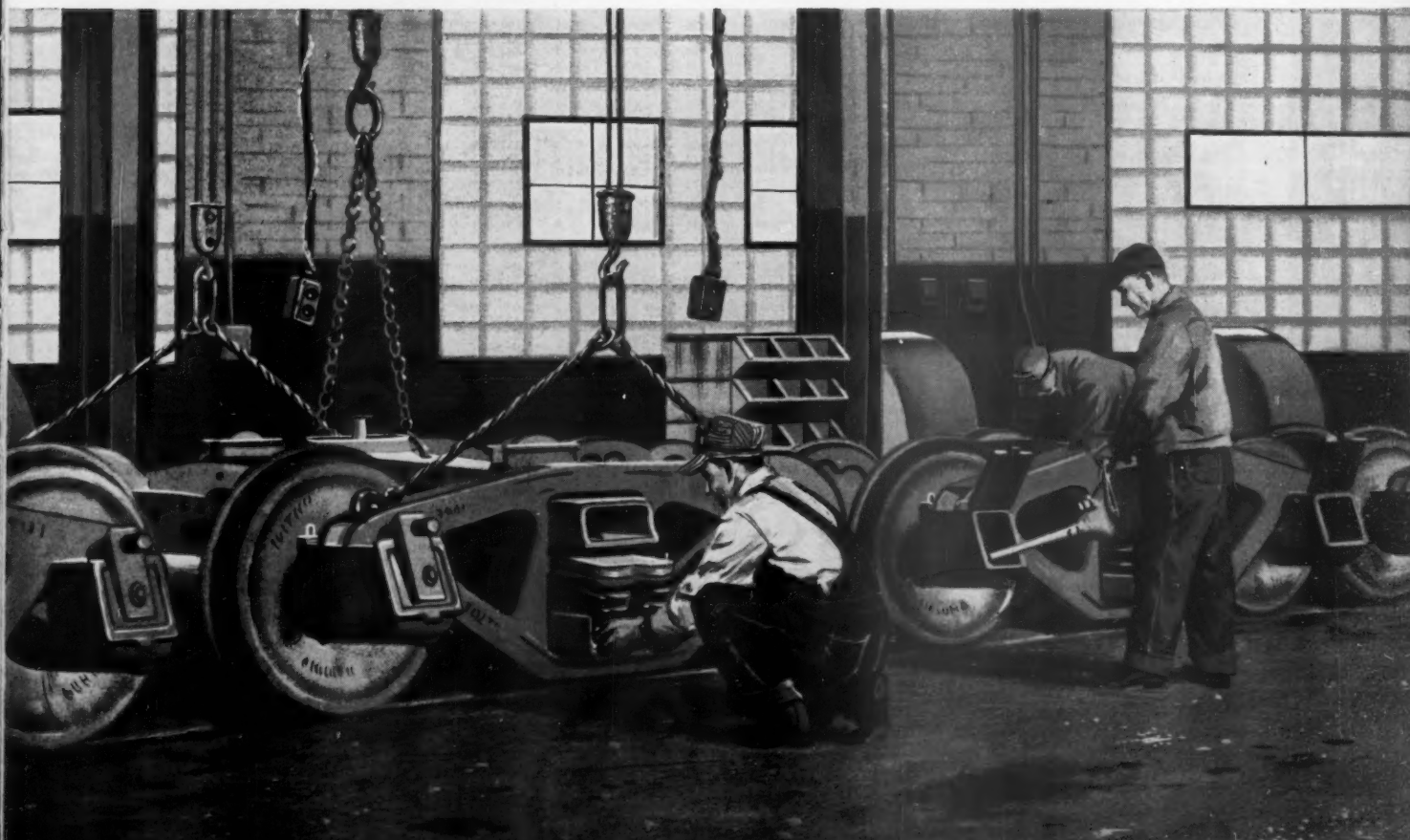
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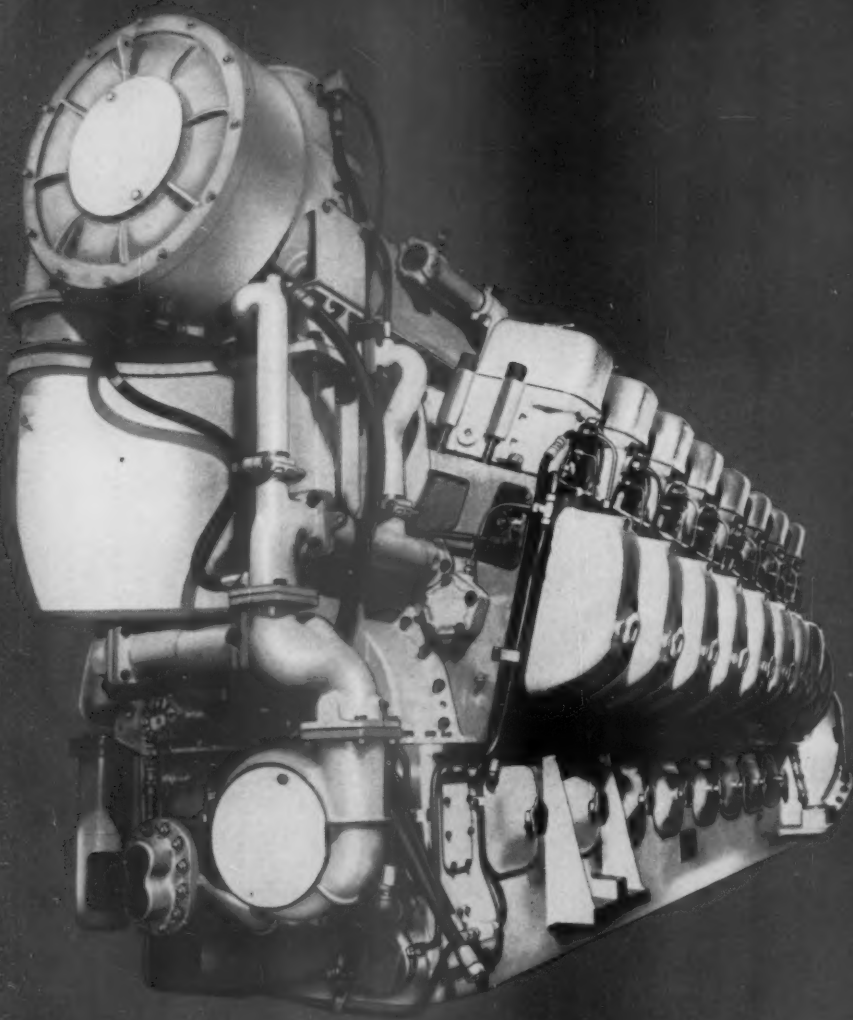


Freight Operating Statistics of Large Railroads—Selected Items

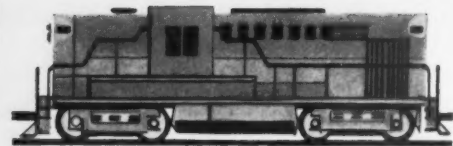
Region, Road (and) Year		Locomotive Miles				Car Miles		Ton-miles (thousands)		Road-locs. on lines				
		Miles of road operated		Train miles	Principal		Loaded (thousands)	Per cent loaded	Gross excl. locos & tenders	Net rev. and non-rev.	Serviceable		Per cent B.O.	
					helper	Light					Unstored	Stored		
New England Region	Boston & Maine.....	1957	1,559	219,736	219,736	3,823	8,305	60.1	582,761	226,156	69	1	10	12.5
	.....	1956	1,560	243,434	250,093	11,509	9,570	64.7	647,248	266,490	70	..	4	5.4
	N. Y., N.H. & Hud.....	1957	1,739	251,131	251,131	16,716	10,222	62.6	688,909	281,243	84	..	7	7.7
	.....	1956	1,740	261,781	261,795	17,764	11,160	67.4	709,433	294,254	94	..	7	6.9
Great Lakes Region	Delaware & Hudson.....	1957	764	156,904	163,167	7,150	8,268	63.5	605,892	307,500	37	..	3	7.5
	.....	1956	771	179,858	185,070	6,511	10,042	71.5	697,027	371,534	38	..	3	7.3
	Del., Lack. & Western.....	1957	928	241,258	248,852	14,309	11,098	66.2	738,580	308,436	61	..	2	3.2
	.....	1956	962	279,665	290,649	23,168	12,234	68.7	804,436	354,635	64	..	1	1.5
	Erie.....	1957	2,207	549,848	552,492	13,953	30,526	65.0	1,956,560	744,341	171	..	2	1.2
	.....	1956	2,207	611,774	617,598	20,804	34,074	67.9	2,148,190	872,083	171	..	1	.6
	Grand Trunk Western.....	1957	951	229,004	240,740	1,781	7,311	59.3	531,342	204,951	55	14	13	15.9
	.....	1956	951	282,742	287,199	2,230	8,811	58.9	650,519	264,750	60	..	15	20.0
	Lehigh Valley.....	1957	1,131	210,484	213,703	5,716	9,110	63.5	636,334	285,637	31	..	3	8.8
	.....	1956	1,135	224,957	228,368	6,821	10,442	65.5	733,894	344,863	33	..	1	2.9
	New York Central.....	1957	10,570	2,084,044	2,100,170	83,985	84,303	54.7	6,489,492	2,749,152	442	22	29	5.9
	.....	1956	10,565	2,277,259	2,309,894	119,090	95,613	59.7	7,057,996	3,164,527	531	6	63	10.5
	New York, Chic. & St. L.....	1957	2,155	639,037	652,143	4,310	27,662	62.5	1,976,044	856,860	154	12	10	5.7
	.....	1956	2,155	746,427	766,579	7,725	31,584	64.2	2,269,496	1,025,399	176	..	16	8.3
	Pitts. & Lake Erie.....	1957	221	54,981	54,981	..	1,934	58.7	173,480	100,897	14	..	1	6.7
	.....	1956	221	63,902	63,902	..	2,809	69.2	234,656	145,755	13	..	..	..
Wabash.....	1957	2,379	505,715	508,053	4,355	22,029	62.1	1,502,980	573,847	109	..	3	2.8	
.....	1956	2,381	532,577	533,777	6,400	23,606	64.8	1,575,195	619,775	111	..	2	1.8	
Central Eastern Region	Baltimore & Ohio.....	1957	5,890	1,467,049	1,602,740	123,418	59,134	59.4	4,926,065	2,309,985	460	26	64	11.6
	.....	1956	5,910	1,659,519	1,848,203	185,681	67,301	62.2	5,369,429	2,622,011	471	12	90	15.7
	Bessemer & Lake Erie.....	1957	208	44,402	46,110	90	1,804	60.4	211,163	135,418	15	..	..	..
	.....	1956	208	51,350	54,984	346	2,520	61.5	292,606	189,045	15	..	..	..
	Central RR Co. of New Jersey.....	1957	612	111,765	113,005	5,488	4,401	62.2	340,185	177,511	61	..	4	6.2
	.....	1956	612	125,682	126,890	6,490	4,887	67.0	369,775	197,433	63	1	3	..
	Chicago & Eastern Ill.....	1957	862	115,841	115,841	2,281	4,776	61.4	362,950	173,105	26	..	1	3.7
	.....	1956	868	123,130	123,130	2,647	5,778	63.6	452,032	230,750	27	..	2	6.9
	Elgin, Joliet & Eastern.....	1957	236	78,993	79,612	..	2,286	59.0	195,313	104,588	36	2	5	11.6
	.....	1956	236	95,236	96,276	..	2,943	60.0	248,518	132,596	37	..	3	7.5
Pennsylvania System.....	1957	9,911	2,717,954	2,895,332	209,590	113,673	59.8	8,645,150	3,960,196	814	49	196	18.5	
.....	1956	9,892	3,093,806	3,295,872	247,456	128,300	65.7	9,412,016	4,337,035	901	3	185	17.0	
Reading.....	1957	1,303	332,348	334,530	11,620	12,725	58.5	1,101,423	579,327	164	17	6	3.2	
.....	1956	1,303	362,209	364,337	14,085	13,974	64.6	1,145,015	627,953	161	12	14	7.5	
Western Maryland.....	1957	845	161,356	166,271	7,992	6,457	61.3	574,309	327,260	50	..	..	..
.....	1956	846	179,177	187,750	11,799	7,229	62.4	622,968	354,245	43	..	..	..
Potomac Region	Chesapeake & Ohio.....	1957	5,067	1,440,165	1,445,362	27,796	63,582	53.4	5,894,377	3,224,710	613	8	79	11.3
	.....	1956	5,067	1,544,979	1,558,696	36,820	66,848	56.5	5,989,164	3,360,405	582	20	84	12.2
	Norfolk & Western.....	1957	2,109	664,398	723,238	58,625	34,222	54.6	3,368,743	1,826,878	222	31	14	5.2
	.....	1956	2,110	752,316	822,111	72,598	37,854	57.5	3,594,750	1,993,544	226	5	14	5.7
Southern Region	Atlantic Coast Line.....	1957	5,282	686,576	686,579	8,620	23,222	56.0	1,806,506	790,366	124	11	2	1.5
	.....	1956	5,283	798,077	798,077	8,948	24,691	59.0	1,870,244	845,175	151	..	2	3.8
	Central of Georgia.....	1957	1,730	195,413	195,413	2,243	7,652	62.7	565,388	267,507	34	..	2	5.4
	.....	1956	1,731	203,113	203,113	2,073	7,875	67.1	559,617	273,460	35	..	2	5.4
	Florida East Coast.....	1957	571	123,551	123,551	..	4,198	50.4	329,457	117,181	58	..	1	1.7
	.....	1956	571	123,543	123,543	..	3,946	51.2	320,113	115,237	47	..	4	7.8
	Gulf, Mobile & Ohio.....	1957	2,717	262,656	262,656	119	14,535	63.7	1,060,697	498,933	87	..	4	4.4
	.....	1956	2,717	272,462	272,462	148	14,913	66.5	1,042,329	492,613	87	..	4	4.4
	Illinois Central.....	1957	6,497	1,099,074	1,099,074	30,840	45,945	57.5	3,514,662	1,566,520	250	42	54	15.6
	.....	1956	6,503	1,245,243	1,246,686	35,205	49,741	60.3	3,765,564	1,750,484	323	6	66	17.6
Louisville & Nashville(*).....	1957	5,686	1,017,413	1,019,795	18,879	35,751	57.5	2,831,357	1,388,279	154	..	..	..
.....	1956	5,698	1,054,052	1,058,848	18,298	38,214	61.7	2,904,400	1,475,861	214	10	33	12.8	
Seaboard Air Line.....	1957	4,049	645,512	645,512	1,819	24,671	58.4	1,913,189	859,781	142	..	6	4.1	
.....	1956	4,051	640,173	640,173	798	24,738	63.1	1,798,125	840,777	148	..	8	5.1	
Southern.....	1957	6,251	848,197	848,189	9,592	39,679	62.6	2,747,257	1,237,824	189	3	11	5.4	
.....	1956	6,259	871,864	871,924	9,966	42,119	66.9	2,820,927	1,321,045	190	12	8	3.8	
Northwestern Region	Chicago & North Western (†).....	1957	9,252	824,060	824,060	7,677	28,933	57.4	2,189,982	954,789	168	4	11	6.0
	.....	1956	9,295	825,413	826,627	10,126	32,678	63.1	2,353,612	1,000,701	184	4	13	6.5
	Chicago Great Western.....	1957	1,437	127,164	127,164	200	7,771	66.0	468,272	197,334	29	..	1	3.3
	.....	1956	1,437	131,350	131,360	198	7,825	69.0	529,477	246,490	30	..	2	6.3
	Chic., Milw., St. P. & Pac.....	1957	10,586	864,815	876,596	15,210	37,598	59.7	2,664,529	1,151,325	285	1	13	4.3
	.....	1956	10,621	968,167	982,592	20,283	42,403	61.9	2,946,669	1,289,433	291	1	11	3.6
	Duluth, Missabe & Iron Range.....	1957	567	64,148	64,289	596	2,117	48.9	228,906	147,087	40	51	22	19.5
	.....	1956	569	129,114	130,131	1,596	5,642	49.7	570,200	322,302	59	..	7	10.6
	Great Northern.....	1957	8,273	1,012,548	1,016,572	23,009	40,187	65.8	2,842,030	1,302,623	246	61	4	1.3
	.....	1956	8,273	1,167,883	1,171,835	31,868	45,880	63.3	3,357,855	1,612,323	261	47	26	7.8
Minneap., St. P. & S. St. Marie.....	1957	4,169	414,441	415,440	1,192	12,810	62.6	800,212	378,732	88	8	2	2.0	
.....	1956	4,171	414,757	416,419	1,662	14,424	63.9	985,266	440,160	82	2	6	6.7	
Northern Pacific.....	1957	6,534	763,829	773,221	15,675	30,800	60.1	2,229,378	946,813	202	52	1	.4	
.....	1956	6,569	803,253	817,545	23,400	33,578	66.1	2,305,101	1,031,045	226	61	23	7.4	
Spokane, Portland & Seattle.....	1957	944	132,089	132,089	1,206	5,525	69.8	368,352	197,745	50	..	3	5.7	
.....	1956	946	140,460	1										

For the Month of November 1957 Compared with November 1956

Region, Road and Year	Freight cars on line				G.t.m. per train-hr. excl. locos and tenders	G.t.m. per train-mi. excl. locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car-miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
	Home	Foreign	Total	Per Cent B.O.									
New England Region													
Boston & Maine.....1957	2,780	7,553	10,333	1.5	42,330	2,663	1,034	27.2	741	45.3	4,836	16.0	103.0
.....1956	1,321	9,562	10,883	1.1	40,567	2,670	1,099	27.8	816	45.3	5,694	15.3	137.9
N. Y., N.H. & Hfd.....1957	3,387	12,411	15,798	3.1	45,044	2,743	1,120	27.5	583	33.8	5,391	16.4	116.4
.....1956	2,241	14,372	16,613	2.7	41,968	2,710	1,124	26.4	581	32.7	5,637	15.5	115.3
Great Lakes Region													
Delaware & Hudson.....1957	4,324	5,041	9,365	4.5	67,165	3,879	1,969	37.2	1,132	47.9	13,416	17.4	156.9
.....1956	1,558	7,374	8,932	6.5	67,359	3,893	2,075	37.0	1,433	54.2	16,063	17.4	174.5
Del., Lack. & Western.....1957	6,726	9,715	16,441	5.2	56,419	3,111	1,299	27.8	658	35.8	11,079	18.4	154.7
.....1956	3,503	11,650	15,153	2.7	52,311	2,932	1,293	29.0	791	39.7	12,288	18.2	180.6
Erie.....1957	10,419	15,808	26,227	4.4	73,930	3,589	1,365	24.4	906	57.2	11,242	20.8	122.1
.....1956	5,617	21,779	27,396	2.3	70,567	3,545	1,439	25.6	1,053	60.6	13,171	20.1	137.4
Grand Trunk Western.....1957	5,718	7,737	13,455	6.6	50,949	2,340	903	28.0	528	31.8	7,184	22.0	108.9
.....1956	4,026	9,494	13,520	6.8	50,249	2,323	945	30.0	649	36.6	9,280	21.8	141.6
Lehigh Valley.....1957	4,294	9,665	13,959	5.9	68,203	3,044	1,366	31.4	674	33.9	8,400	22.6	235.3
.....1956	4,439	9,840	14,279	6.9	71,217	3,301	1,551	30.0	795	36.7	10,128	21.8	249.7
New York Central.....1957	60,074	79,847	139,921	3.9	53,701	3,147	1,333	32.6	651	36.5	8,670	17.2	164.0
.....1956	44,553	102,661	147,214	2.5	50,401	3,161	1,417	33.1	721	36.5	9,984	16.3	152.8
New York, Chic. & St. L.....1957	11,185	12,321	23,506	9.0	56,178	3,127	1,356	31.0	1,169	60.3	13,254	18.2	132.1
.....1956	6,995	19,587	26,582	4.9	50,963	3,118	1,409	32.5	1,268	60.9	15,861	16.8	144.5
Pitta. & Lake Erie.....1957	5,152	5,392	10,544	10.3	52,143	3,155	1,835	52.2	291	9.5	15,218	16.5	125.2
.....1956	2,101	9,376	11,477	4.2	54,852	3,679	2,285	51.9	412	11.5	21,984	14.9	166.9
Wabash.....1957	9,372	10,731	20,103	5.6	64,968	2,982	1,138	26.0	951	58.8	8,040	21.9	161.7
.....1956	8,588	11,556	20,144	4.5	63,827	2,968	1,168	26.3	1,033	60.7	8,677	21.6	168.5
Central Eastern Region													
Baltimore & Ohio.....1957	51,099	47,708	98,807	6.9	53,039	3,409	1,599	39.1	796	34.3	13,073	15.8	109.9
.....1956	43,698	53,133	96,831	4.1	50,370	3,303	1,613	39.0	911	37.6	14,789	15.6	123.3
Bessemer & Lake Erie.....1957	7,641	859	8,500	6.0	85,387	5,014	3,215	75.1	633	14.0	21,702	18.0	117.2
.....1956	4,159	1,167	5,326	6.1	90,815	5,985	3,867	75.0	1,177	25.5	30,296	15.9	133.6
Central RR Co. of New Jersey.....1957	3,601	9,434	13,035	10.0	43,507	3,165	1,652	40.3	473	18.9	9,668	14.3	84.5
.....1956	1,963	10,715	12,578	6.9	43,406	3,064	1,636	40.4	524	19.4	10,753	14.8	91.0
Chicago & Eastern Ill.....1957	3,556	2,833	6,389	10.5	57,970	3,148	1,502	36.2	948	42.6	6,694	18.5	145.5
.....1956	2,228	3,779	6,007	10.3	63,407	3,692	1,885	39.9	1,264	49.8	8,861	17.3	147.0
Elgin, Joliet & Eastern.....1957	7,047	7,196	14,243	4.3	21,520	2,605	1,395	45.8	233	8.6	14,772	8.7	81.4
.....1956	6,249	11,386	17,635	5.1	20,076	2,736	1,460	45.1	223	8.2	18,728	7.7	105.5
Pennsylvania System.....1957	104,921	89,518	194,439	10.8	54,975	3,261	1,471	34.3	667	32.5	13,117	17.3	105.5
.....1956	104,699	91,300	195,999	6.5	51,629	3,136	1,512	35.4	774	33.3	15,289	17.0	113.6
Reading.....1957	16,568	7,716	24,284	3.9	31,415	3,174	1,743	45.5	579	21.7	14,820	16.0	72.2
.....1956	9,145	24,050	33,195	2.9	50,835	3,161	1,734	44.9	633	21.8	16,664	16.1	79.2
Western Maryland.....1957	6,858	3,714	10,572	2.4	53,305	3,670	2,091	50.7	1,128	36.3	12,910	15.0	125.0
.....1956	4,632	6,038	10,670	1.8	50,296	3,571	2,030	49.0	1,242	40.6	13,958	14.5	165.2
Poconos Region													
Chesapeake & Ohio.....1957	67,420	26,205	93,625	1.1	79,419	4,118	2,253	50.7	1,153	42.6	21,214	19.4	76.0
.....1956	49,671	31,864	81,535	.7	73,878	3,900	2,188	50.3	1,356	47.7	22,106	19.1	85.6
Norfolk & Western.....1957	44,424	9,326	53,750	1.1	90,346	5,204	2,822	53.4	1,183	40.6	28,874	17.8	107.7
.....1956	34,503	10,544	45,047	.8	82,104	4,914	2,725	52.7	1,511	49.9	31,494	17.2	133.2
Southern Region													
Atlantic Coast Line.....1957	24,098	16,260	40,358	2.5	46,910	2,641	1,155	34.0	661	34.7	4,988	17.8	190.7
.....1956	17,469	17,364	34,833	4.6	44,458	2,350	1,062	34.2	801	39.7	5,333	19.0	184.0
Central of Georgia.....1957	4,107	5,049	9,156	3.7	51,856	2,902	1,373	35.0	948	43.2	5,154	17.9	201.4
.....1956	2,264	6,501	8,765	2.5	48,700	2,759	1,348	34.7	997	42.8	5,266	17.7	203.6
Florida East Coast.....1957	641	4,142	4,783	.6	44,371	2,668	949	27.9	892	63.4	6,841	16.6	78.7
.....1956	296	4,081	4,377	.3	40,531	2,594	934	29.2	905	60.5	6,727	15.6	92.7
Gulf, Mobile & Ohio.....1957	7,354	9,941	17,295	6.0	76,996	4,041	1,981	34.3	985	45.1	6,121	19.1	104.3
.....1956	4,918	10,468	15,386	6.7	73,840	3,829	1,710	33.0	1,034	47.1	6,047	19.3	108.7
Illinois Central.....1957	30,207	18,948	49,155	2.1	56,057	3,229	1,439	34.1	1,023	52.2	8,037	17.5	114.4
.....1956	23,153	26,438	49,591	1.7	51,524	3,061	1,423	35.2	1,149	54.2	8,973	17.0	117.3
Louisville & Nashville(*).....1957	37,851	17,036	54,887	5.0	50,332	2,791	1,368	38.8	874	39.1	8,139	18.1	230.5
.....1956	28,413	20,910	49,323	3.8	50,327	2,761	1,403	38.6	1,014	42.5	8,634	18.3	152.8
Seaboard Air Line.....1957	16,732	12,649	29,381	2.5	57,276	3,025	1,360	34.8	988	48.5	7,078	19.3	170.8
.....1956	11,957	18,207	30,164	1.9	51,592	2,856	1,335	34.0	964	44.9	6,918	18.4	166.6
Southern.....1957	17,766	25,613	43,379	4.7	53,944	3,253	1,466	31.2	964	49.4	6,601	16.7	150.5
.....1956	14,843	27,235	42,078	3.8	55,099	3,245	1,520	31.4	1,074	51.2	7,035	17.0	153.9
Northwestern Region													
Chicago & North Western (†).....1957	23,472	24,301	47,773	4.3	49,022	2,678	1,168	33.0	640	33.8	3,440	18.4	160.2
.....1956	16,791	34,298	51,089	6.1	48,269	2,907	1,236	30.6	616	31.9	3,589	16.9	151.1
Chicago Great Western.....1957	2,620	3,914	6,534	3.3	69,435	3,691	1,556	25.4	979	58.4	4,577	18.9	147.4
.....1956	1,612	4,607	6,219	3.1	77,082	4,036	1,879	31.5	1,302	59.9	5,718	19.1	146.3
Chic., Milw., St. P. & Pac.....1957	36,333	25,176	61,509	5.2	60,260	3,094	1,337	30.6	631	34.5	3,625	19.6	103.3
.....1956	27,931	32,381	60,312	6.0	58,940	2,944	1,316	30.4	715	38.0	4,047	19.3	117.6
Duluth, Missabe & Iron Range.....1957	15,239	421	15,660	5.5	68,432	3,767	2,420	69.5	313	9.2	8,647	19.2	26.0
.....1956	14,238	874	15,112	3.3	78,964	4,687	2,649	57.1	716	25.3	18,881	17.9	75.2
Great Northern.....1957	26,224	15,672	41,896	2.5	57,800	2,837	1,300	32.4	1,010	47.3	5,248	20.6	120.8
.....1956	21,161	23,199	44,360	2.3	57,149	2,916	1,400	35.1	1,240	54.0	6,496	19.9	128.3
Minneap., St. P. & S. St. Marie.....1957	7,464	7,901	15,365	2.8	42,955	1,939	918	29.6	827	44.7	3,028	22.2	160.8
.....1956	6,134	8,680	14,814	4.0	50,164	2,385	1,065	30.5	962	49.4	3,518	21.1	172.1
Northern Pacific.....1957	20,511	14,847	35,358	3.5	61,020	3,053	1,242	30.0	880	47.3	4,830	20.9	102.3
.....1956	17,308	18,335	35,643	4.5	57,221	2,883	1,290	30.7	995	49.0	5,232	19.9	97.8
Spokane, Portland & Seattle.....1957	1,530	3,868	5,398	1.9	41,300	2,807	1,178	47.2	6,983	14.8	92.2		
.....1956	1,168	3,990	5,158	1.4	42,252	2,798	1,331	32.0	1,203	52.2	6,561	15.2	95.8
Central Western Region													
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).....1957	58,123	33,176	91,299	6.3	76,013	3,302	1,213	25.8	1,053	66.0	7,265	23.1	132.6
.....1956	52,508	38,340	90,848	4.6	74,842	3,194	1,194	25.5	1,080	66.8	7,430	23.5	139.3
Chic., Burl. & Quincy.....1957	20,431	20,523	40,954	3.3	64,536	3,047	1,280	28.8	1,059	58.7	5,168	21.2	159.3
.....1956	18,928	24,287	43,215	2.9	62,832	2,995	1,263	28.9	1,092	59.8	5,519	21.0	173.8
Chic., Rock I. & Pac.....1957	17,630	23,845</											



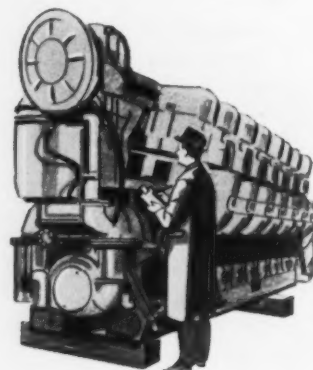
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MARKET OUTLOOK *at a glance*

Carloadings Move Up By a Slight Margin

Loadings of revenue freight in the week ended February 15 totaled 533,237 cars, the Association of American Railroads announced on February 20. This was an increase of 948 cars, or 0.2%, compared with the previous week; a decrease of 142,729 cars, or 21.1%, compared with the corresponding week last year; and a decrease of 165,082 cars, or 23.6%, compared with the equivalent 1956 week.

Loadings of revenue freight for the week ended February 8 totaled 532,289 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS For the week ended Saturday, Feb. 8			
District	1958	1957	1956
Eastern	84,515	117,678	119,030
Allegheny	93,100	133,553	140,775
Poconchos	42,561	57,518	58,994
Southern	103,600	120,294	126,870
Northwestern	60,689	72,692	74,713
Central Western	99,183	111,340	111,764
Southwestern ..	48,641	52,176	52,182
Total Western Districts	208,513	236,208	238,659
Total All Roads	532,289	665,251	684,328
Commodities:			
Grain and grain products	48,428	51,396	45,302
Livestock	4,276	5,407	6,418
Coal	104,291	134,025	141,192
Coke	7,053	13,938	13,745
Forest Products ..	36,456	38,395	41,188
Ore	13,492	21,679	21,247
Merchandise i.e.l.	46,291	56,574	60,938
Miscellaneous ..	272,002	343,837	354,298
February 8	532,289	665,251	684,328
February 1	550,426	647,972	680,989
January 25	550,667	665,745	691,850
January 18	572,353	657,269	699,286
January 11	569,444	680,766	710,338
Cumulative total, 6 weeks	3,246,928	3,878,204	4,078,090

IN CANADA.—Carloadings for the seven-day period ended February 7 were not available when this issue of Railway Age went to press.

New Equipment

FREIGHT-TRAIN CARS

► **January Deliveries Up, Orders Down.**—New freight cars delivered in January totaled 7,219, compared with 6,174 in December 1957 and 8,403 in January 1957, ARCI and AAR report. Freight cars ordered last month totaled 401, compared with 3,492 in December 1957 and 6,304 in January 1957. Freight cars on order February 1 totaled 48,787, compared with 55,941 on January 1 and 114,656 on February 1, 1957.

Type	Ordered Jan. '58	Delivered Jan. '58	On Order Feb. 1, '58
Box—Plain	0	2,197	10,734
Box—Auto	0	0	500
Flat	38	75	2,532
Gondola	0	1,815	10,786
Hopper	0	2,057	15,650
Covered Hopper	100	450	3,223
Refrigerator	200	25	2,120
Tank	33	544	2,890
Caboose	30	18	121
Other	0	38	231
TOTAL	401	7,219	48,787
Car Builders	375	4,836	19,214
Company Shops	26	2,383	29,573

► **Santa Fe.**—Ordered 25 70-ton flat cars from its Topeka, Kan., shops.

► **Soo Line.**—Ordered one 250-ton flat car from its Fond du Lac, Wis., shops.

New Facilities

► **Chesapeake & Ohio.**—Will build a new passenger, mail-handling and baggage station in Grand Rapids, Mich., at approximate cost of \$300,000. New facility will be on C&O property near Freeman street, off River road, away from city's heavily congested downtown area. Road is being evicted from Union Station in Grand Rapids because of new expressway construction.

► **Illinois Central.**—Plans to complete installation of automatic grade crossing protection devices on 11 south Chicago branch crossings by the end of 1958. It's part of a 29-crossing, \$650,000 protection program in which the railroad is paying 95 per cent of the total cost. IC cites wage and maintenance economies in estimating annual savings of \$265,000 for the overall project. Completion of the entire program is set for 1960.



ARTHUR J. MCGINNIS



JAMES G. LYNE

McGinnis New Simmons-Boardman President; Lyne Becomes Chairman

Arthur J. McGinnis has been elected president of the Simmons-Boardman Publishing Corporation to succeed James G. Lyne, who becomes chairman of the board.

George Dusenbury, vice-president and editorial and promotion director, and Duane C. Salisbury, vice-president and sales director, were elected to the board of directors.

Robert C. Van Ness, circulation director, was elected a vice-president.

Mr. McGinnis was graduated from Fordham University in 1932 and the Harvard Graduate School of Business Administration in 1934. He joined the Simmons-Boardman company as associate editor of its *Railway Age* weekly in 1940 and subsequently was appointed equipment and supplies editor and financial editor. He was elected assistant treasurer of the corporation in May 1946, and treasurer in November 1950. He was elected executive vice-president and treasurer in

February 1954. In May 1955, Mr. McGinnis also became publisher of the *American Builder* magazine, which is the company's largest. In addition to the presidency, Mr. McGinnis will continue as company treasurer and as publisher of the *American Builder*.

Mr. Lyne has been president of the company since 1949, prior to which he was executive vice-president. He has been a director since 1943. He has been continuously in the company's service since October 1920, when he joined Simmons-Boardman as a junior editor on *Railway Age*. Mr. Lyne was graduated from Kansas University and also holds a Ph.D. degree from New York University. In addition to his corporate duties, Mr. Lyne is editor of *Railway Age*.

Simmons-Boardman publishes nine magazines, in addition to encyclopedias, catalogs and directories, and industrial and consumer books.

New Piggyback Plan on the Way

A new brand of piggyback may be in the offing. Freight forwarders are proposing a form of TOFC in which shippers own all the equipment and provide all terminal services.

Railroads would perform only the line-haul, ramp-to-ramp transportation service for a fixed charge per flat car.

The proposal is before the Trans-Continental Freight Bureau. It will come up again at the bureau's May meeting. Freight forwarders—notably U. S. Freight Lines, National Carloading and Republic

Carloading—are interested in the idea.

Specifically, the proposal calls for tariff amendments which would permit handling freight in trailers or containers from Chicago to Los Angeles and San Francisco, and return. The shipper would pay the railroad \$924 per car, loaded or empty. Cars would have a maximum length of 80 ft to handle two trailers.

The proposal is being offered experimentally to meet highway competition "without affecting the volume of rates between other origins and destinations."

Santa Fe Shortens Its Chicago-Coast Schedules

Santa Fe has cut a full day off its merchandise freight schedules from Chicago to the Pacific Coast.

The new timecard will provide rail and forwarder merchandise traffic with fifth-morning delivery at Los Angeles and the San Francisco Bay area, instead of the previous sixth-morning service.

Santa Fe's action applies to Chicago departures on Wednesday, Thursday, Friday and Saturday. The schedules involve 11 p.m. departure, with arrival at California points on the fourth evening in time for next morning delivery.

Big factor in the expedited operation, Santa Fe said, has been forwarders' cooperation in agreeing to earlier release of loaded cars in Chicago and greater flexibility in placement of loads at destination. Switching will be held to a minimum because of the proximity of freight houses to yards at all points involved.

Santa Fe's announcement came close on the heels of a similar move by C&E-Cotton Belt-SP to cut 24 hours off Chicago-Los Angeles freight operations (*Railway Age*, Feb. 3, p. 33).

ICC Raps Court On Exempt Trucking

More unregulated trucking will result from a decision made reluctantly by the ICC because past court rulings indicate that it would have been "futile" to exclude the commodities involved from benefits of the Interstate Commerce Act's so-called agricultural exemptions.

A proposal to limit these exemptions is one of the railroad industry's recommendations to the Senate's Surface Transportation Subcommittee. And that is one of the railroad proposals endorsed by American Trucking Associations.

Commodities whose transportation will be freed from regulation are green coffee beans, cocoa beans, tea and salt-cured cucumbers. The commission found that they are "agricultural . . . commodities (not including manufactured products thereof)" within the meaning of the act's Section 203 (b) (6).

In the same report, in No. MC-C-968, the commission ruled that the exemption provisions apply to foreign-grown agricultural commodities as well as to those produced in this country. While that question had not been considered specifically by the commission in previous reports, those reports qualified such commodities as bananas and wool for the exemption without reference to where they were produced.

The commission's complaint against the broadening of the exemption by the courts was set out as follows:

"We have no doubt that the American farmer only was in the mind of Congress when this section was adopted, and on principle we know of no reason why uni-



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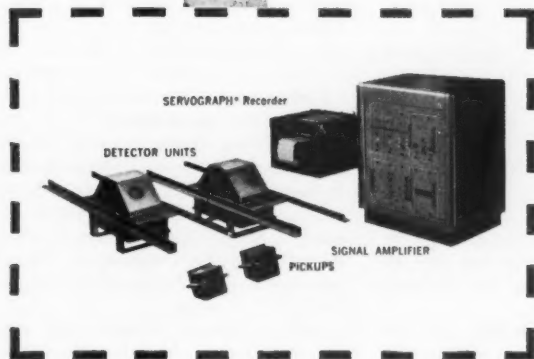
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formity of regulation of motor carriers should be disrupted in the interest of any one group of foreign citizens. On the other hand the courts have repeatedly forced upon this commission a construction of this exemption far more liberal and more disruptive of motor carrier regulation than anything which we think the Congress intended. In the face of these decisions it would be futile for us at this time to ignore the fact that, regardless of what it had in mind, it did not place any limitation on Section 203 (b) (6) in this respect."

In qualifying the four commodities, the commission applied the "continuing substantial identity" test which the courts have been using. It was thus "compelled," as it put it, to the conclusion that the processes undergone by them "do not cause them substantially to lose their identity as tea leaves, coffee beans, cocoa beans, or cucumbers."

Separate expressions came from Chairman Freas and Commissioners Arpaia, Tuggle and Murphy. Commissioner Walrath subscribed to Mr. Freas' concurring-in-part opinion, which agreed with the majority finding that transportation of foreign-grown agricultural products was covered by the exemption.

Commissioner Arpaia's opinion was a lengthy dissent which warned that the ef-

fect of the majority findings will be "to subserve a trend which is defeating the entire objective of transportation regulation." He had in mind the "mushrooming expansion of unregulated transportation."

Mr. Arpaia also protested the majority's defeatist attitude. "Rather than yielding in our responsibility, I prefer to believe that the courts will welcome the exercise of our independent judgment and a statement of the reasons therefor," Mr. Arpaia said. He added:

"It should be pointed out to the court that the continuing substantial identity test is impractical and difficult to apply. It is vague and uncertain and means different things to different people. It is creating conditions undermining public transportation."

Commissioner Hutchinson subscribed to the Arpaia statement while Commissioner Murphy, dissenting-in-part, would not have extended the exemption to tea and salt-cured cucumbers. Commissioner Tuggle's statement, a dissent, included the following:

"I know of very few ways better to foster unsound economic conditions in transportation than to yield to the present non-congressional pressures toward broadened exemptions and greater freedom for the fringe area carrier, all clearly at the expense of our backbone carriers."

Senate Hears Truckers' Proposals

The trucking industry had its innings before the Senate's Surface Transportation Subcommittee last week.

Under the auspices of American Trucking Associations, the industry offered the testimony of some 20 witnesses at the subcommittee's second series of hearings on the "deteriorating railroad situation."

The subcommittee, headed by Senator Smathers of Florida, is a unit of the Senate Committee on Interstate and Foreign Commerce. It heard the railroad industry's presentation last month (Railway Age, Jan. 20, p. 9 and Jan. 27, p. 11).

As expected, the truckers registered vigorous opposition to the railroad industry's freedom program and its call for what it would consider more adequate highway user charges. Also as expected, they endorsed, or did not oppose, many of the other railroad proposals (Railway Age, Feb. 10, p. 13).

These included the proposed repeal of the excise taxes on for-hire transportation, limitation of the so-called agricultural exemptions, a sharper definition of private carriage, power for the ICC to override state commissions to permit abandonment of unprofitable intrastate rail services, and the railroad tax-relief recommendations.

The vigorously opposed railroad freedom program calls for freedom to make competitive rates and for removal of restrictions on railroad operation of other forms of transport.

Concluding his statement in opposition

to the latter proposal, ATA President Guy W. Rutland, Jr., had comment which was an obvious reference to the article in Railway Age of February 10. He said:

"A prominent railroad publication predicted early this month that we would testify to the danger of such entry of railroads into the trucking business by pointing out the known danger of delivering lettuce by a rabbit. Successful prophecy by railroads or their spokesmen has not been too noticeable up to now. Therefore, I gladly offer you the phrase, first, in a friendly desire to improve their standing in the field of prediction, and also because it happens to be a precise and sound reference."

Points of agreement with the railroads, in addition to those mentioned above, include dissatisfaction with present laws relating to the transportation of mail, Mr. Rutland said. The trucking industry, he added, is not yet in agreement as to the language of legislation it wants "to insure the proper transportation of mail by motor carriers."

The truckers also favor repeal of those provisions of the Interstate Commerce Act's section 22 which authorize free or reduced-rate transportation for government agencies.

As the ATA president noted, the railroad presentation to the committee included no recommendation for a change in Section 22. The matter, he said, "is known to be a controversial one within the railroad industry."



NP Pampers Its Porkers

Hogs that go to market via Northern Pacific now ride in style. NP is building 200 40-ft "Hog Palace" cars which feature roller-bearing trucks with snubbers; rubber draft gear; adjustable metal shutters in the car sides, and aluminum-painted roofs and ends. The shutters can be closed to protect against winter's cold, the aluminum paint reflects summer's heat. Interior surfaces of the steel side slats and shutters are insulated to protect the pigs from injury. Each "palace" will carry the gold and black emblem shown getting the once-over from NP President Robert S. Macfarlane (left), and C. H. Burgess, vice-president—operations.

Canadian Pacific Sees No Strike 'at This Time'

"There is no question of a strike" on the Canadian Pacific "at this time," CPR management feels.

R. A. Emerson, vice-president, operation and maintenance, said in New York city last week that the problem now is "getting the union to sit down and negotiate."

His comments followed a report by a Canadian Royal Commission which upheld the railroad's contention that the fireman in a diesel locomotive is an anachronism (Railway Age, Feb. 10, p. 9).

Mr. Emerson indicated in his remarks to the New York Society of Security Analysts that the road plans to make adjustments for the firemen whose jobs would be abolished. He estimated that savings of \$11 million a year will be realized when the commission order is implemented—and "after the firemen are absorbed."

Mr. Emerson joined CPR President N. R. Crump, Vice-President, Finance, L. B. Unwin, and F. V. Stone, assistant to the president, in a CPR forum.

Mr. Crump dealt at length with the road's diversified operations. He noted

that the road is able to offer shippers increasingly adaptable service through its truck affiliates. He held out hopes for even better service through the facilities of Smith Transport, which the CPR is buying (Railway Age, Feb. 17, p 7). This trucker can extend CPR highway services eastward to St. John's from Winnipeg, Mr. Crump said. He added that it has rights into New York and New Jersey.

Railroad Rate Increases Authorized in Oregon

Railroads operating in Oregon have been authorized to increase freight rates generally, to the extent set by the ICC in Ex Parte 206. Certain commodities were excepted from the 206 increase and other items were held to a 9% boost.

Public Utilities Commissioner Howard Morgan said it's apparent that some immediate relief was warranted. But entry of a final order, he said, should be deferred pending further study of the impact of proposed rates on movement of certain commodities.

He called for more study on the "tendency of flat percentage increases to divert or dry up traffic and to distort rate relationships. In evolving a truly reasonable and just intrastate rate structure it is likewise important to develop a formula for separating intrastate costs and revenues from interstate costs and revenues, especially as here, where there is evidence of some tendency of flat percentage increases to bring rates to a level above that which the traffic will bear."

The commissioner's order held the increase to 9% on logs and wood chips, when moving under contract rates only. No increases were authorized for fresh fruits, fresh or green vegetables, sugar beets, empty fruit lugs, logs and wood chips (non-contract rates), and limestone.

RR Radio Channels Confirmed by FCC

The Federal Communications Commission has allocated the frequency band 160.215 mc to 161.565 mc, inclusive, for railroad use. The allocation is effective April 1.

Railroads are to be allowed to use the band's primary, secondary and tertiary frequencies with a minimum of restriction.

In the order, FCC says existing licensees operating on frequencies which are in effect deleted by this order "may continue to operate the stations of such systems on the respective frequencies for the period of their existing authorizations or until further order of the Commission."

A new frequency assignment plan covering the new allocation of frequencies is being prepared by the Communications Section, AAR. This is soon to be forwarded to railroads for review and comment.

Eastern RRs Hit by Blizzard

Eastern railroads last week were digging out from the region's worst blizzard in years.

With snow blanketing the whole area, trains were running late or in some cases, annulled entirely. Commuter service was erratic and freight was slower.

Swarms of men and machines had dug most points clear by mid-week, but through passenger trains were still running as much as three to five hours late. Freeze-ups in switches and train lines continued to complicate operations as a severe cold wave gripped the area with little thaw in sight.

Freight continued to move in most cases, but with delays, and volume dropped sharply as factories and plants curtailed operations.

Most unusual casualty of the blizzard was the PRR's electric locomotives, more than 60 of which went out of service. The moist snow, driven by high winds, formed tiny crystals which swept into the units. Subsequent melting of the snow short-circuited power equipment, caused burned out motors and piled up expensive repair jobs.

Costs mounted as a result of the big cleanup job. The Reading, for example, reported it will spend around \$310,000 in snow removal and other snow fighting

costs. Another road, which usually figures on using about 1,000 men all winter, said it has already run up to 4,000 this year. A third road said it was too early to estimate what the storm cost but was certain it would be "plenty high."

Air line operations were hard hit early in the storm and, as usual, railroad passenger demand picked up. This only added to problems. With trains running late, turnaround was short with little time for servicing and thawing equipment.

Last Tuesday afternoon, the Pennsylvania stopped accepting or delivering through trains to Boston via the New Haven. A PRR spokesman attributed the move to the fact that schedules were off to the point where it wasn't practical to try for normal connections. As a result, the New Haven annulled three trains and began running two others with coaches only and food service.

Commuter operations were hard hit, too, most trains running late in the New York area. Delays in some cases ran into hours. A collision and derailment added to the New Haven's woes. The PRR's Jersey Shore line was tied up Tuesday night by a grade crossing accident. While not directly attributable to the storm, the cold did slow clearing operations and add further to delays.



C&EI, Cotton Belt Mark Start of New Service

A handshake and a switching move marked the start of an expedited freight service involving Chicago & Eastern Illinois, Cotton Belt and Southern Pacific. Partners in the handshake were David O. Mathews (left), C&EI presi-

dent, and Walter G. Degelow, Cotton Belt's general traffic manager. Scene of the action was a freight yard at Illmo, Mo., as a new C&EI freight train delivered its first cars to the Cotton Belt (Railway Age, Feb. 3, p. 32).

People in the News

CANADIAN NATIONAL.—James L. Bremner, assistant engineer, Portage-Brandon division, appointed division engineer, Dauphin, Man., succeeding A. D. Shackleford, retired.

D. W. Brayshaw, supervisor, employment office, Toronto, appointed personnel assistant, employee relations department, Toronto.

D. A. Slack, assistant engineer maintenance of way, Moncton N.B., appointed terminal construction engineer there, with jurisdiction over the Moncton hump yard project. **J. C. MacLauchlan**, division engineer, Campbellton, N.B., transferred to the Halifax division at Halifax, N.S., succeeding H. B. Titus, retired. **M. B. Martin**, assistant division engineer, Edmundston, N.B., succeeds Mr. MacLauchlan.

T. G. Sevigny appointed assistant to director of colonization and agriculture.

Henry C. Friel, general counsel, appointed vice-president and general counsel, Montreal, Que.

Mervyn B. Martin, assistant division engineer, Edmundston, N.B., appointed division engineer, Campbellton, N.B.

Andrew M. Shea, former superintendent, St. Lawrence division, who has been on special assignment with the statistics branch, Department of Research and Development, since 1955, retired February 1.

In addition to his other duties, **L. J. Henderson**, general manager, department of road transport, Montreal, will assume jurisdiction over piggyback services, except as follows: In the



Henry C. Friel
CNR



Roy L. Milbourne
NYC

operation of piggyback terminals and services, Mr. Henderson will report to the vice-president of operation. For solicitation and rate making relating to piggyback carriage of "for-hire" carrier vehicles, he will report to the general traffic manager. The latter also will exercise direct jurisdiction over rates and solicitation relating to piggyback services for railway-owned vehicles.

CHICAGO GREAT WESTERN.—A. E. Smith named assistant chief engineer, Oelwein, Ia.

NEW YORK CENTRAL.—Roy L. Milbourne, executive assistant to vice-president—freight sales and service, New York, appointed to the newly created position of director, Flexi-Van sales and service. **C. P. Rahn**, **C. H. LaFond** and **E. J. Paronett** appointed managers of Flexi-Van sales and service in Chicago, Detroit and New York, respectively. In addition to his Flexi-Van duties Mr. Milbourne will be in charge of merchandise, forwarder, consolidator and shipper association traffic.

NORTHERN PACIFIC.—L. S. Waller, assistant superintendent, dining car department, St. Paul, Minn., transferred to Seattle, Wash, succeeding **William Zweifel**, retired. **Russell L. Johnson**, dining car instructor, succeeds Mr. Waller.

SOO LINE.—W. M. Christel, transportation consultant and previously superintendent transportation (Railway Age, Aug. 5, 1957, p. 2), retired December 31, 1957.

Paul J. Isakson, division engineer, Winnipeg division, Thief River Falls, Minn., transferred to the Minnesota division, Enderlin, N.D., succeeding **R. C. Postels**, promoted (Railway Age, Dec. 23, 1957, p. 40). **Warren B. Peterson** named to succeed Mr. Isakson at Thief River Falls.

SOUTHERN PACIFIC.—W. Travis Jones, district passenger agent, Tucson, Ariz., named district freight and passenger agent.

TEXAS & NEW ORLEANS.—J. R. Bergeron appointed auditor, freight account, Houston, Tex., succeeding **J. G. Moors**, who retired January 31. **J. E. Hartfield** named assistant auditor of freight accounts.

UNION PACIFIC.—O. C. Wilson appointed division storekeeper, Pocatello, Ida.

WESTERN MARYLAND.—W. Ray Downey appointed assistant freight traffic manager, Pittsburgh. Mr. Downey was formerly in charge of the Pittsburgh office of the Terminal Railroad Association of St. Louis.

OBITUARY

J. Fred Plunkett, retired general superintendent, Chicago & Western Indiana, died February 14 in Englewood Hospital, Chicago.

William J. Riordan, assistant general freight agent, Illinois Terminal, East Peoria, Ill., died February 11 in St. Francis Hospital, Peoria, Ill.

Harry J. Hurst, 56, assistant to treasurer, Chicago & North Western, died February 16 in St. Anne's Hospital, Chicago.



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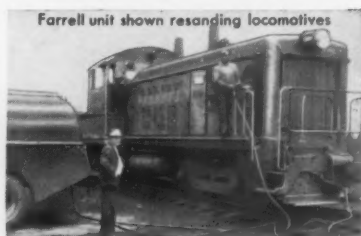
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“My moral beliefs, as I have said, are those of my religion—and my political and economic beliefs are anti-socialist. The stockholders of the Trans-American Railroad were aware of my religious and political opinions when they employed me. They did not, however, hire me, primarily, to serve as a missionary in behalf of my religious and political faith. Instead, they gave me the job of protecting and advancing their legitimate interests as stockholders in the Trans-American Railroad.

“I have always believed, and still believe, that my political principles are compatible with my duty to the stockholders of this railroad. True to these principles, I have not asked for or accepted any government assistance for this company. I have sought to do my duty to the stockholders by opposing to the best of my ability the award of government assistance to our company’s competitors—truck operators, barge operators and airlines.

“My course of protecting the interest of our stockholders by fighting subsidies to all agencies of transportation has not succeeded. The more I have complained against government investment in transportation facilities in competition with our railroad, the greater these government investments have become. I have seen an enormous volume of passenger and freight traffic diverted from our railroad which we would not have lost, except for government aid to our rivals.

*Mr. O'Connor and his railroad are fictitious, but not untrue to real life.

“In all candor, I must admit that our railroad would also not have lost this traffic—if we had gone out after, and received, subsidies for our patrons comparable to those passed along to patrons of rival agencies of transportation. It isn’t the fact that there have been transportation subsidies that has hurt the railroads—but that the subsidies have been used exclusively to promote the use of other kinds of transportation, but not use of railroads. It is inequality of treatment, not subsidies themselves, that has hurt us.

•
“Rather than seek outright subsidies for this railroad, my principles would require me to resign. But I can, at least, do this much: I can calculate the government aid given to traffic by transportation agencies that parallel our railroad. And I can dramatize this subsidy issue by telling our shippers and passengers how much we would be able to reduce our charges if the taxpayers were to provide aid and tax-relief for us, similar to that they provide for our competitors.

“In short, if I cannot personally correct this subsidy situation, I can at least present it more dramatically, so people will understand it better than they do. I must remember that the decision for or against subsidies or socialism is one that the American people are going to make. I am personally against such government intervention, but I have only one vote, and I must yield to the principle of majority rule. There are a lot of things that government does that I don’t like—but which I necessarily accept.

•
“One other thing—I should make it clear—if government should indemnify a railroad for its losses in providing a service that the railroad would gladly withdraw—then such payment is not a subsidy. We must distinguish between *subsidy* and *indemnity*—they are not identical.

“Railroads are being given a lot of advice about not dragging out the ‘crying towel’ all the time. This is good advice. But ‘crying’ is merely the term for a form of complaint that is unsuccessful.

“I think we might wake people up if—instead of putting all our emphasis on the favors given to our rivals—we’d try showing how much more it would help the public if they’d give similar favors to us. We don’t want such favors, of course. But neither do we want to go broke.”

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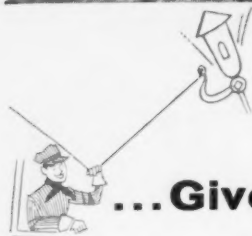
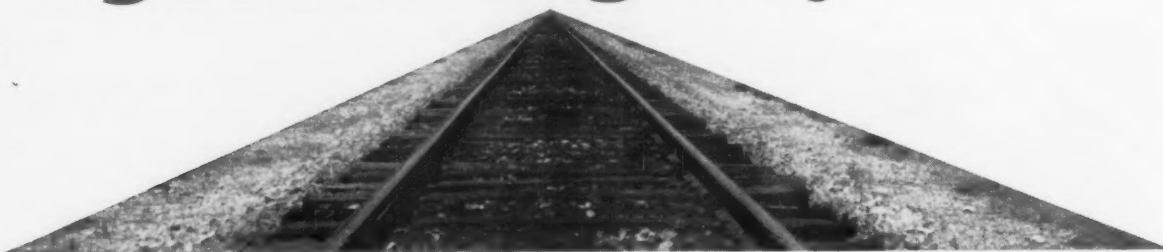
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